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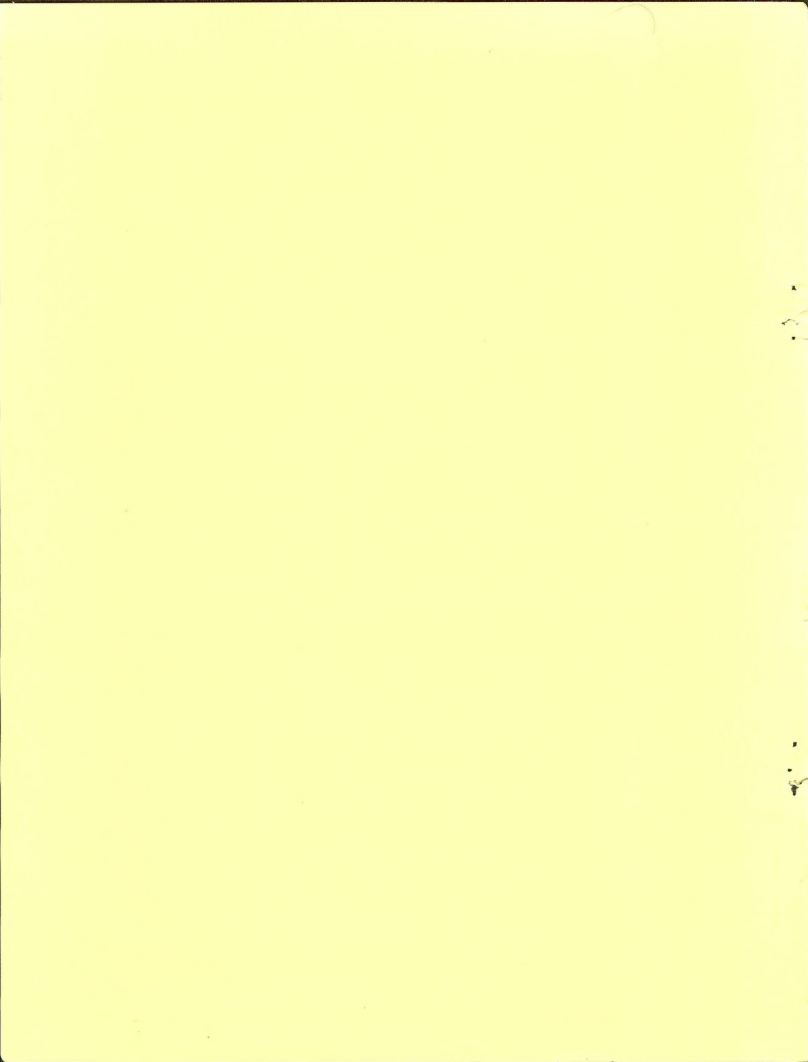
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to the Bureau of Land Management

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GRAZING SYSTEMS RESEARCH

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Influence of Grazing Management Systems
on Vegetation and Wildlife Habitat

by

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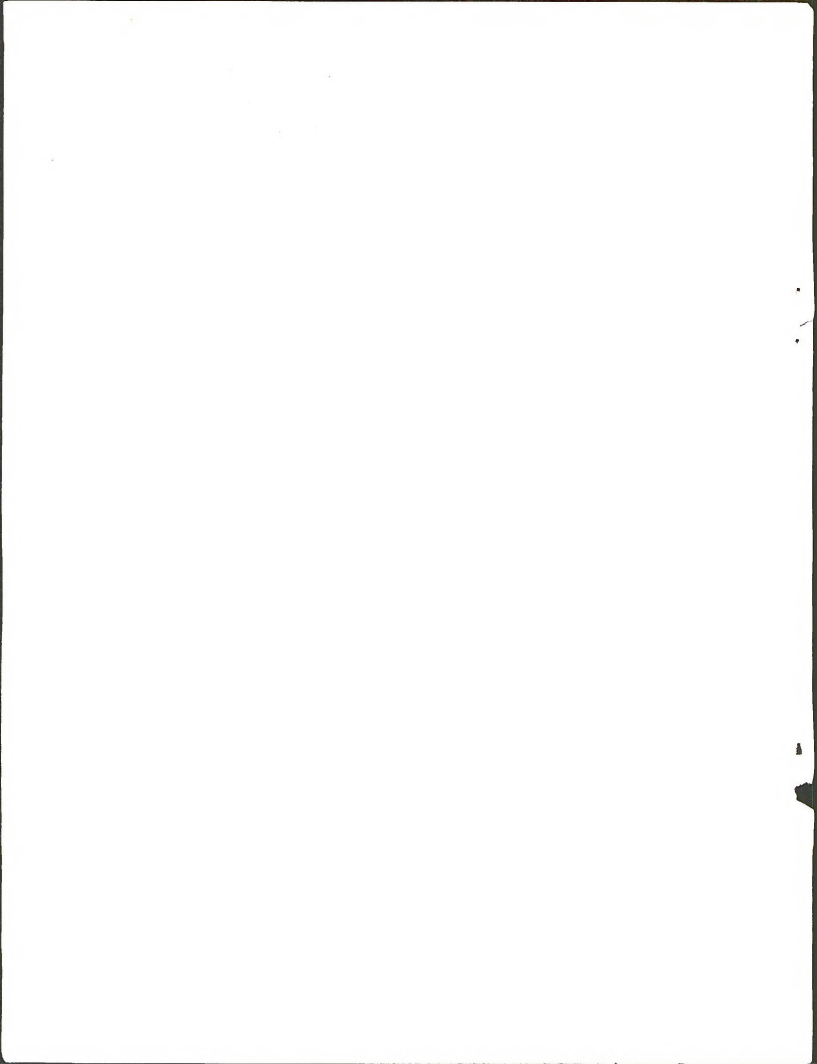


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Introduction

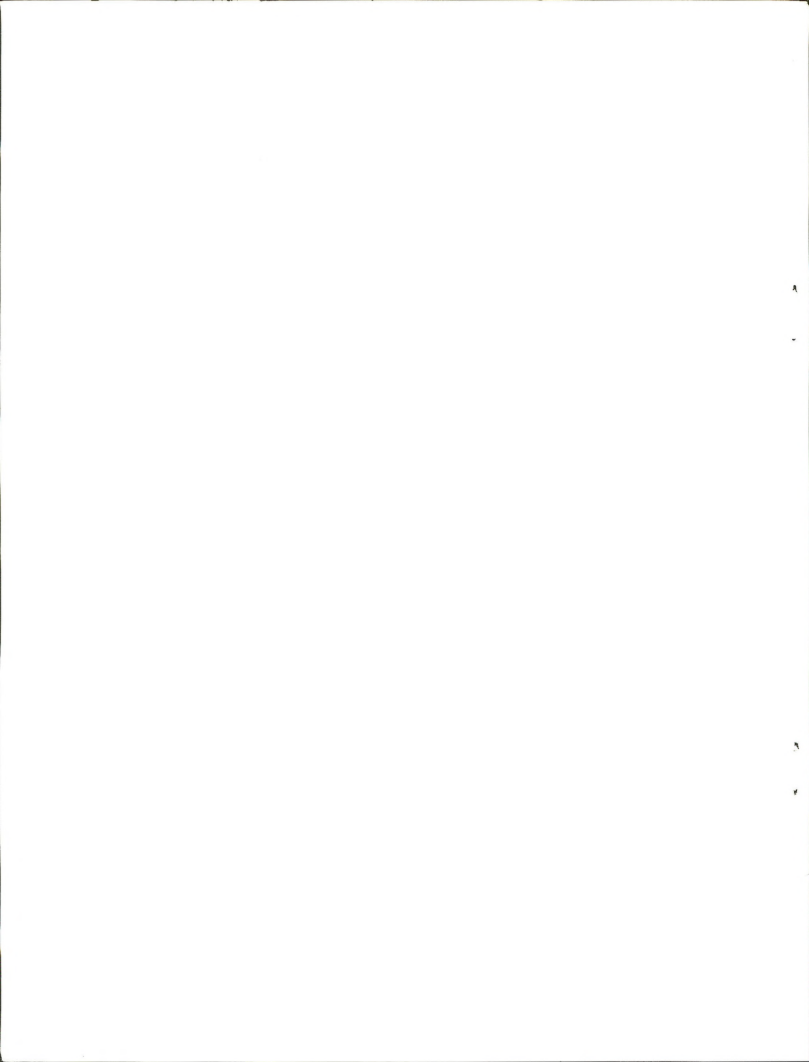
In 1967 a cooperative program to study the influence of grazing systems upon vegetation and wildlife habitat was initiated by the Wyoming Agricultural Experiment Station and the Bureau of Land Management. The 68,000 acre study site is located west of Baggs, Wyoming. The site is divided into a four pasture rest-rotation unit, a two pasture deferred-grazing unit and a one pasture unit with season-long grazing. Acreages and grazing schedules for the various units are shown in Figure 1.

Methods and Procedures

During summer, 1971 cover and composition of vegetation was determined on the 95 permanent trend transects which were laid out in 1967 and 1968. In the Utah juniper type the 7,000 feet of belt transect established in 1967 and 1968 were sampled for ground cover and cover and density of shrubs and trees. Utilization of forage by sheep and cattle was estimated along permanent paced transects at the end of grazing periods.

Precipitation and Vegetation Response

Precipitation for the period October 1970 to October 1971 averaged 10.09 inches, the second highest total for the four periods of record (Table 1). Precipitation was below normal in March and April but was well above normal in May. The dry early spring and below normal temper-



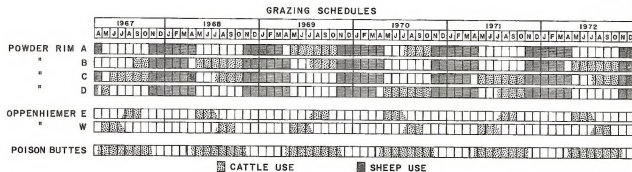
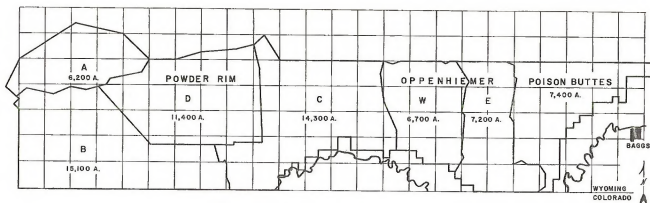


Figure 1. Map of the Baggs study area showing grazing units and approximate acreages. Grazing schedules for each unit are shown in the diagram below. The grazing schedule for the rest-rotation system in the Powder Rim allotment was adjusted to permit a more equitable distribution of forage among the operators. This change became effective on May 1, 1968 and a cycle of the grazing system was completed at the end of the 1971 season.

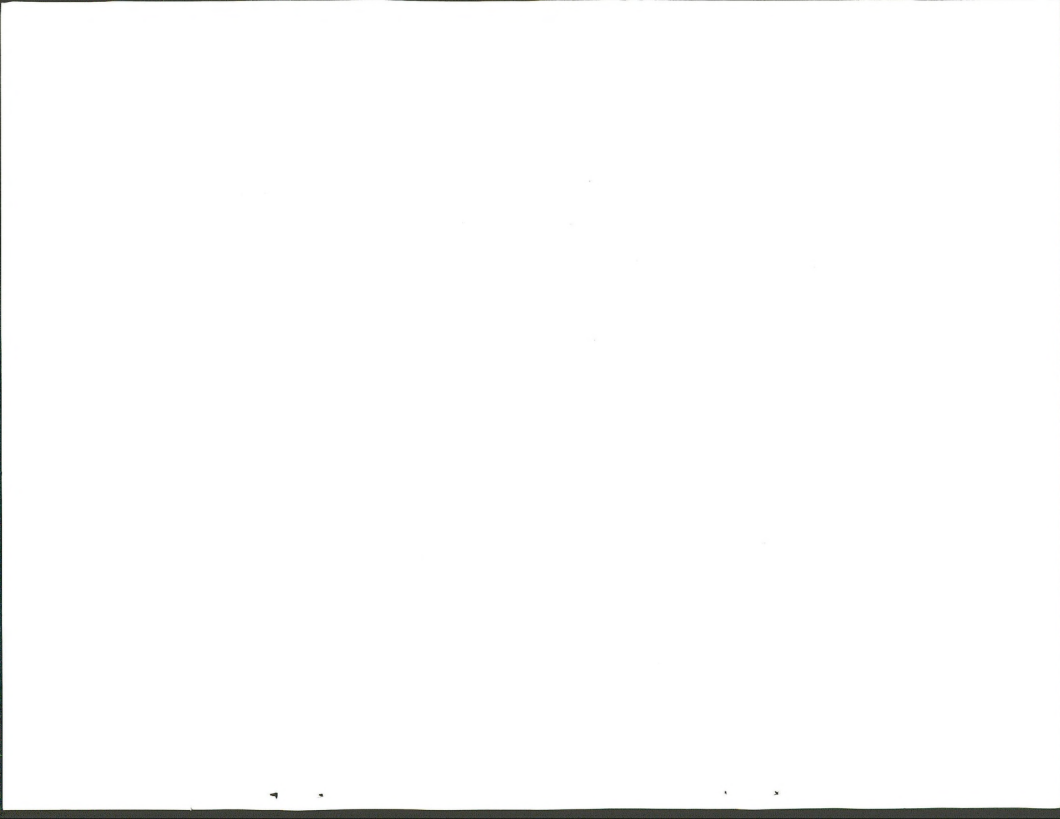
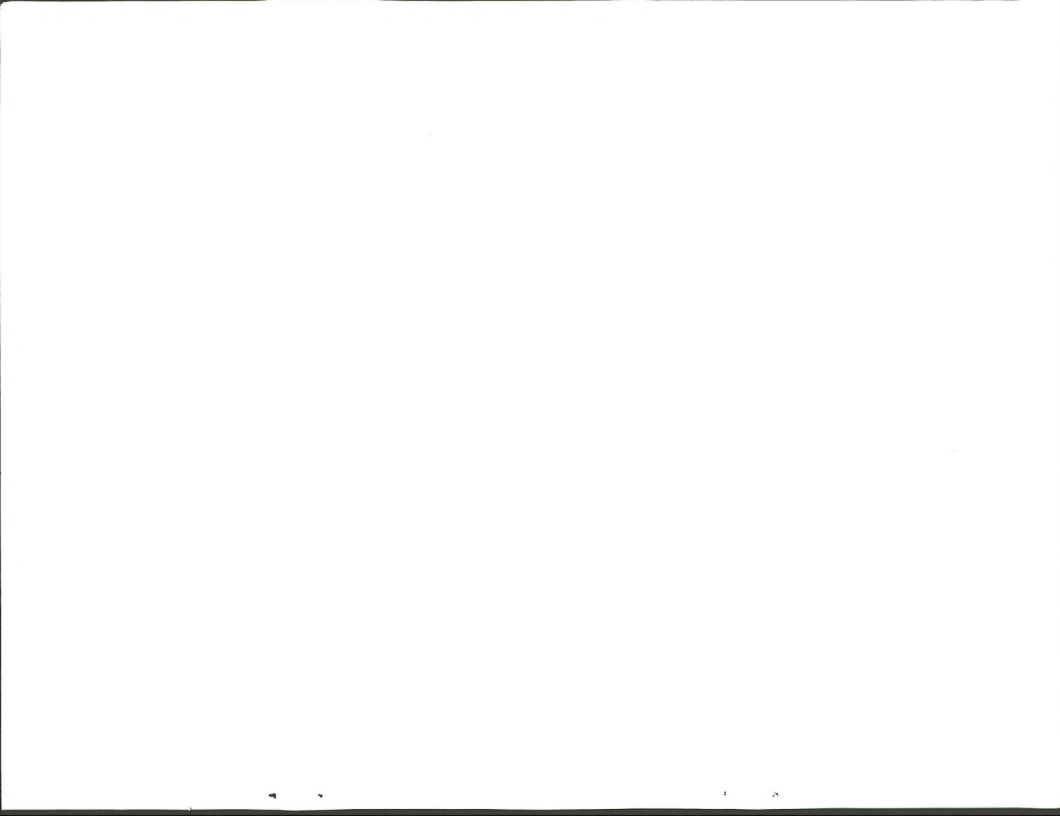


TABLE 1. Precipitation Records.

Rain Gauge Number	Location: Pasture or Pasture Junction	Total Oct. 1967 Oct. 1968	Total Oct. 1968 Oct. 1969	Total Oct. 1969 Oct. 1970	17 Apr 1971	1 Jul 1971	1 Sep 1971	13 Oct 1971	Total Oct. 1970 Oct. 1971
124	Poison Buttes Exc. I	10.69	11.99	10.83	4.15	4.27	0.46	1.63	10.51
125	Poison Buttes Exc. II	11.06	12.82	12.09	4.81	4.30	0.88	1.67	11.66
126	Poison Buttes-Opp. E	8.50	10.97	9.20	3.80	3.96	1.49	1.72	10.97
127	Oppenhiemer E-W	8.29	9.39	9.81	3.42	4.26	1.70	1.48	10.86
128	Oppenhiemer Exc.	9.17	10.86	10.69	3.81	4.07	0.56	1.57	10.01
129	Oppenhiemer W-C	7.43	9.08	9.00	3.27	3.67	0.90	1.54	9.38
130	Powder Rim C Exc.	7.04	8.97	9.35	3.12	4.28	0.60	1.55	9.55
131	Powder Rim D Exc.	6.90	8.75	8.42	3.24	4.29	1.13	1.23	9.89
132	Powder Rim D-C	7.11	9.96	9.82	3.04	4.14	1.07	1.43	9.68
133	Powder Rim D-C-B	6.29	8.73	8.97	2.78	4.17	0.53	1.24	8.72
134	Powder Rim B-D	6.87	8.85	7.32	2.93	4.11	0.48	1.22	8.74
135	Powder Rim B	8.91	11.23	9.40	3.47	4.78	0.64	1.16	10.05
136	Powder Rim B Exc. I	8.19	9.17	9.46	3.51	5.17	0.47	1.26	10.41
137	Powder Rim B Exc. II	10.75	12.94	11.47	5.20	5.36	0.74	1.14	12.44
138	Powder Rim A-B	9.05	12.12	9.08	3.41	4.39	0.39	1.17	9.36
139	Powder Rim A Exc. I	8.94	10.87	9.41	3.37	4.86	0.51	1.36	10.10
140	Powder Rim A	7.29	9.39	7.05	2.98	4.48	0.49	1.26	9.21
AVERAGE		8.38	10.36	9.49	3.55	4.39	0.77	1.39	10.09

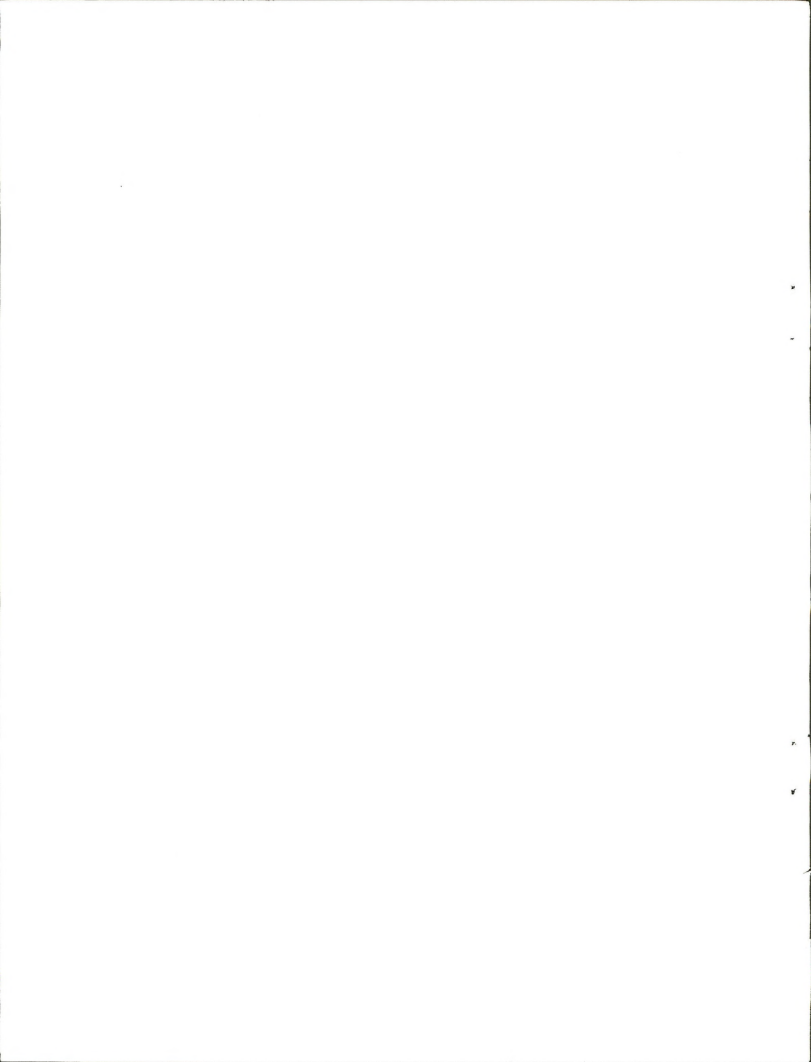


atures during May combined to retard early forage growth. However, the heavy precipitation during May supplied enough moisture to produce an above average forage crop. Needleandthread grass, prairie junegrass, bottlebush squirreltail and Indian ricegrass produced large seed crops. Seed production of bluebunch wheatgrass was only average and western wheatgrass produced little seed. Dense, rank stands of cheatgrass developed in sheep bedgrounds and other disturbed areas but other annual grasses and forbs were not particularly abundant.

No effective moisture fell during June or July and all grasses matured and dried rapidly. Several surface reservoirs, containing only moderate amounts of water at the beginning of the season, dried up during July. Thus, in the two rest-rotation pastures used in 1971 (C and D), cattle had to rely on windmills for water during the latter part of the season. The installation of three windmills in Pasture C during the summer greatly improved permanent water distribution in this pasture. The reservoirs in the Oppenhiemer west pasture did not contain any water during the season and the deferred grazing system was abandoned. Cattle were allowed to graze both Oppenhiemer pastures at will.

Trends in Vegetative Cover

The summaries of the vegetative cover and composition for each trend transect sampled in 1971 are presented in Appendix A. Plant species corresponding to the codes used in the trend transect summaries and in tables are given in Appendix B.



A grazing system was followed in 1967 on the four pasture rotation unit; however, the system was substantially modified in 1968. Thus, the end of one complete grazing cycle was not reached until the end of summer, 1971. The two pasture deferred system of grazing was actually in effect only during 1967, 1968 and 1969 because in both 1970 and 1971 there was a water shortage and the deferred system was not followed.

Since grass furnishes the bulk of the forage for livestock the trend in vegetation on the grazing units is perhaps best evaluated in terms of changes in grass cover between 1967 and 1971. The 1967 and 1971 mean percentage cover values (averages of 20 1 ft.² plots at each sampling site) for western wheatgrass, Indian ricegrass, needleandthread grass and bluebunch wheatgrass were compared on 73 grazed sites (Table 2). For western wheatgrass, Indian ricegrass and needleandthread grass there is a preponderance of sites showing an increase in cover. Sites showing gains and losses of cover for bluebunch wheatgrass were about equal. These data indicate that there has been a general increase in cover of the important forage species in all pastures. There are no discernible differences between grazing systems or between pastures. Each pasture has sites on which cover decreased as well as sites where increases in cover occurred.

The 10 ft. wide belt transects in the Utah juniper type were resampled in 1971. These transects were first sampled in 1967 with the exception of 300 ft. in Pasture A and 600 ft. in Pasture D which were not sampled until 1968. Comparison of the 1967-68 and 1971 data for ground cover (determined

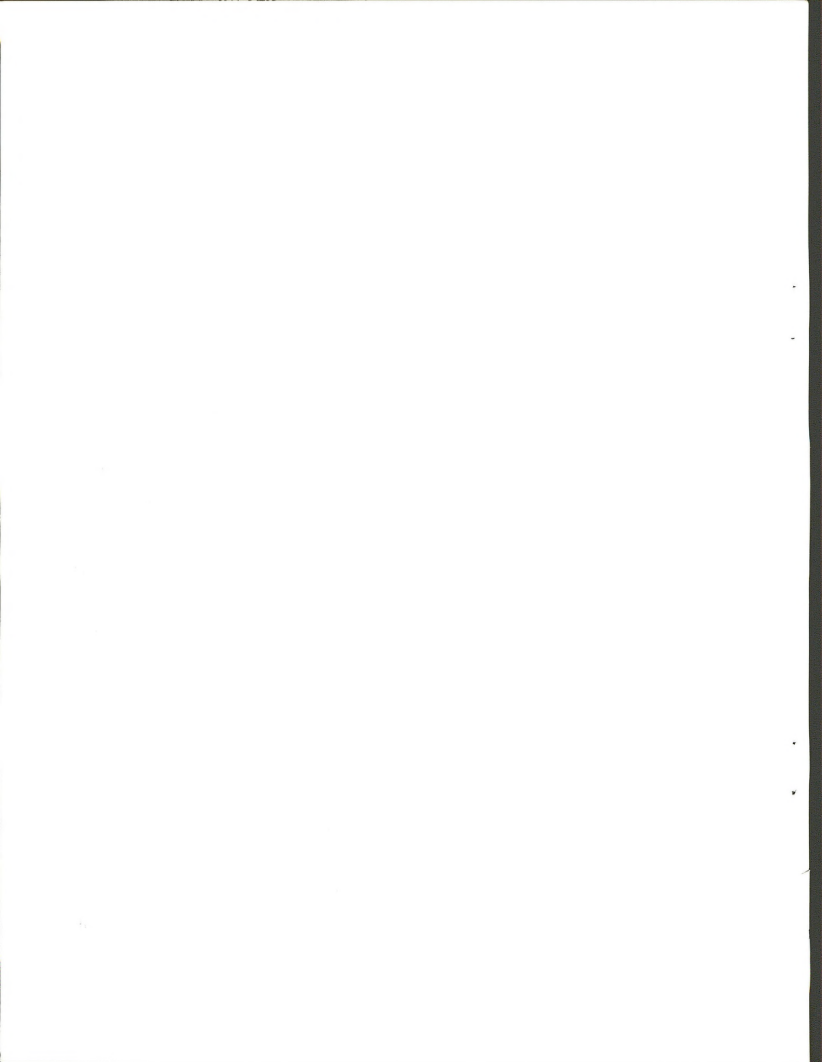
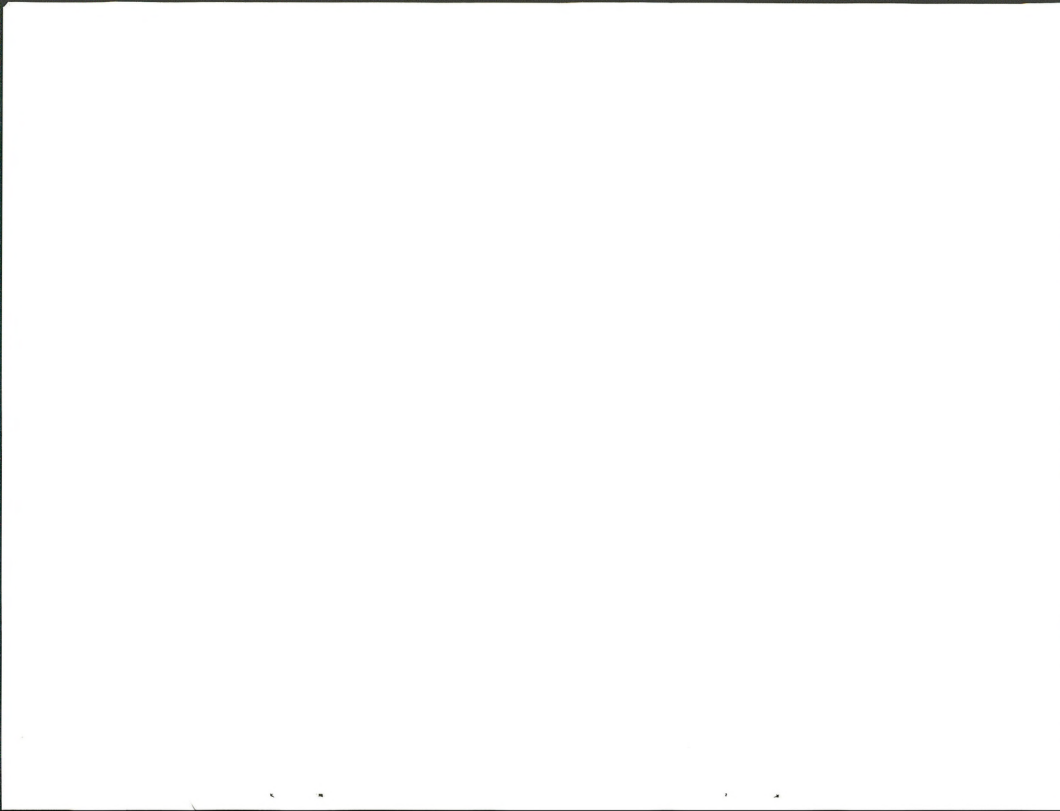


Table 2. Number of grazed trend transect sites showing an increase or decrease in cover of grasses on the various pastures from 1967 to 1971.

Pasture	Total grass cover			Western wheatgrass			Indian ricegrass			Needleandthread			Bluebunch wheatgrass		
	Number of sites with			Number of sites with			Number of sites with			Number of sites with			Number of sites with		
	Increase	Loss	No	Increase	Loss	No	Increase	Loss	No	Increase	Loss	No	Increase	Loss	No
Poison Buttes	10	1		11			2	2		2	5				
Oppenhiemer E	8	1		7	1		3			3	1	1			1
Oppenhiemer W	6	3		7	2		4	3		4		1		1	
Powder Rim A	9	3		9	1		7	3	1	5	2	1	4	3	
Powder Rim B	9	3		9	1		5	4	3	1	3			1	
Powder Rim C	7	2		5	2	1	2	4	1	7					
Powder Rim D	10		1	10	1		6	2	1	5		1			1
Total	59	13	1	58	8	1	29	18	6	27	11	4	4	5	2



from line point plots at 1 ft. intervals) reveals essentially no change (Table 3). The small differences between values are most likely due to sampling variation. There was a very small increase in canopy cover of Utah juniper which was consistent among pastures (Table 4). Mountain mahogany also showed a slight increase in canopy cover in all pastures where it occurred. No consistent increases or decreases in cover occurred for other shrubs or for grasses or forbs.

The number of shrubs and trees counted on the belt transects show considerable variation between the two sampling dates (Table 5). However, many of the differences are attributable to sampling variation. Minor differences in tape placement and the subjective, difficult process of distinguishing individuals led to variation in counts. Since very few dead, mature plants were observed during the 1971 sampling it is felt that the populations of mature plants are relatively stable. The only real changes in plant numbers appears to be in the young plant category. Small, 1-to-3 year old plants of mountain mahogany were quite abundant in 1967, but in most pastures few germinated in subsequent years and the original population of young plants declined. Young shadscale plants declined in numbers also. The number of young black sagebrush and big sagebrush plants tended to increase. Assuming that the mature stands are fully stocked, there are more than enough young plants of each species to replace the very small number of mature individuals which are lost each year. Collectively, the above data indicate that the rate of change in the Utah juniper vegetation type is extremely slow.

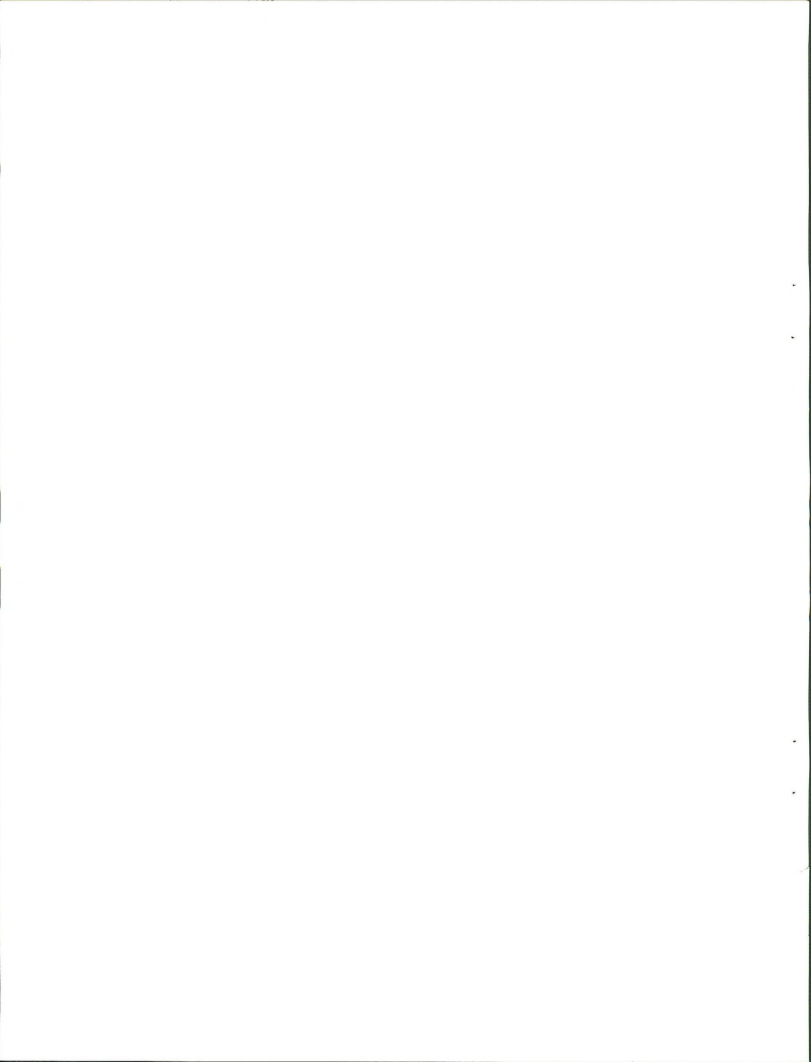


Table 3. Percentage of area occupied in 1967 and 1971 by various categories of ground cover in the Utah juniper vegetation type in each pasture. Ground cover was determined at the soil surface at one foot intervals along the center line of permanent belt transects.

Pasture and Sample Size	Live Woody		Grass		Forb		Bare		Litter		Debris		Rock	
	1967	1971	1967	1971	1967	1971	1967	1971	1967	1971	1967	1971	1967	1971
	Percent													
Poison Buttes 985 Ft.	6.1	5.0	0.6	0.6	1.9	1.7	60.8	59.9	26.4	29.2	2.7	1.4	1.5	2.2
Oppenhiemer E 985 Ft.	6.0	5.6	0.9	1.3	1.0	1.4	69.6	67.1	19.2	22.4	2.5	1.8	0.8	0.4
Oppenhiemer W 990 Ft.	5.0	3.9	1.6	1.3	0.6	2.0	64.8	63.3	24.1	26.2	2.3	2.3	1.6	1.0
Pasture A <u>1</u> / 1000 Ft.	5.3	3.1	1.8	1.4	1.7	2.7	59.4	57.9	25.9	28.1	3.3	3.8	2.6	3.0
Pasture B 1000 Ft.	4.1	3.3	0.1	0	0.2	0	74.6	77.2	17.5	16.5	3.3	2.1	0.2	0.9
Pasture C 1000 Ft.	11.8	7.4	0.1	0			74.0	77.5	10.2	10.8	1.2	1.3	2.7	3.0
Pasture D <u>2</u> / 1000 Ft.	6.8	5.2	0.7	0.4	0.5	0.4	64.5	64.2	21.7	23.9	1.9	2.2	3.9	3.7

1/ 300 ft. of transect not established until 1968.

2/ 600 ft. of transect not established until 1968.

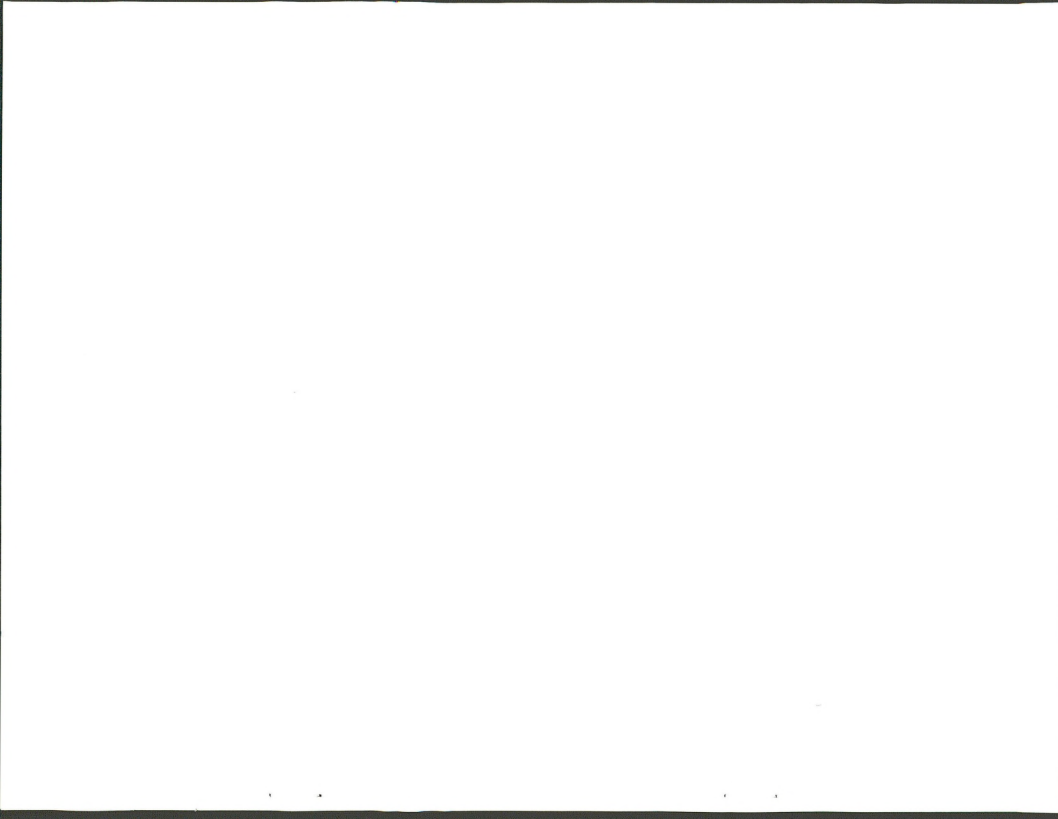


Table 4. Percentage of area occupied in 1967 and 1971 by canopy of trees and shrubs and basal area of grasses and forbs in the Utah juniper vegetation type in each pasture. Cover determinations were made at one foot intervals along the center line of permanent belt transects.

Pasture and Sample Size	Juos		Arno		Artr		Cemo		Putr		Atco		Grasses		Forbs	
	1967	1971	1967	1971	1967	1971	1967	1971	1967	1971	1967	1971	1967	1971	1967	1971
	Percent															
Poison Buttes 985 Ft.	20.8	22.3	1.6	1.3	0.8	0.6	4.7	5.6	0.7	0.9			0.7	0.6	1.9	1.7
Oppenhiemer E 985 Ft.	9.8	10.7	3.1	4.2	1.7	1.8	1.5	2.0	0.2	0.3			0.8	1.1	1.0	1.4
Oppenhiemer W 990 Ft.	16.4	18.4	2.4	2.0	0.5	0.3	2.2	3.3	0.2	0.2			1.6	1.1	0.6	2.0
Pasture A <u>1/</u> 1000 Ft.	19.6	20.1	2.3	2.1	2.3	2.3			0.7	0.9			1.8	1.4	1.7	2.3
Pasture B 1000 Ft.	15.2	16.5			0.3	0.4	2.9	3.6			0.5	0.3	0.1	0	0.2	0.1
Pasture C 1000 Ft.	11.5	12.4			1.2	0.9	10.0	9.2			1.0	0.9	0.1	0	0	0.2
Pasture D <u>2/</u> 1000 Ft.	16.5	16.7	1.0	0.7	1.1	0.9	4.7	5.4	2.1	1.9	0	0.3	0.7	0.6	0.5	0.2

1/ 300 ft. of transect not established until 1968.

2/ 600 ft. of transect not established until 1968.

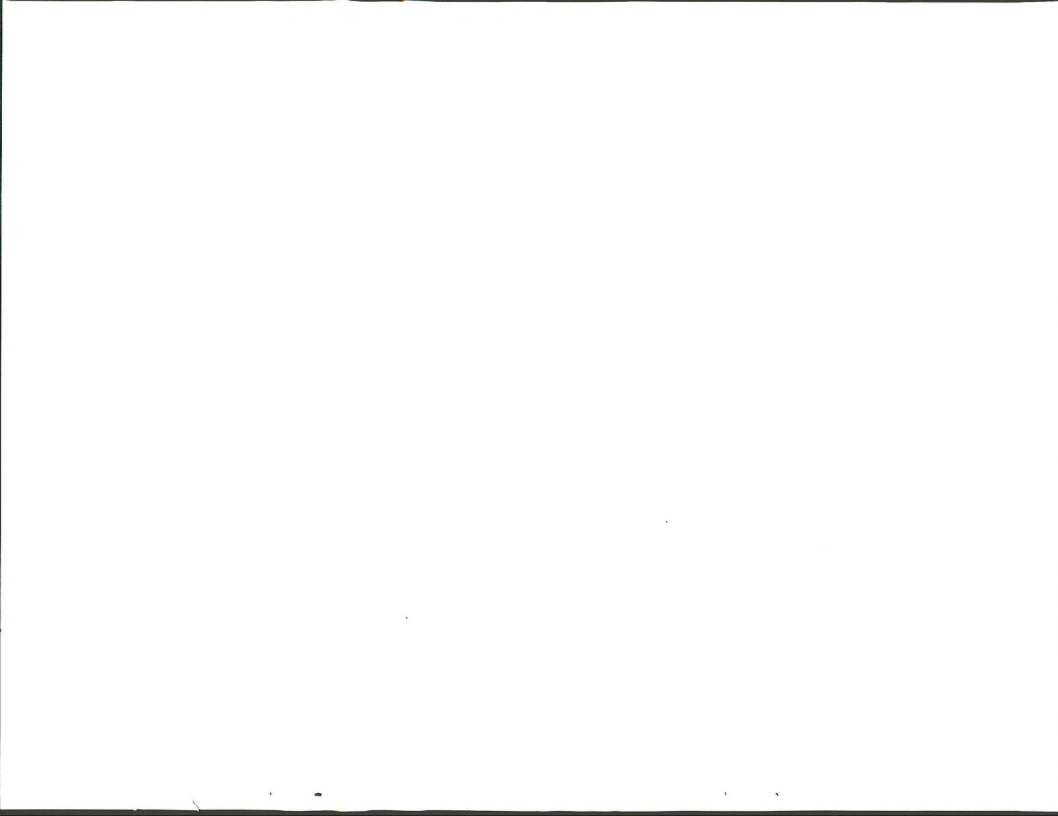


Table 5. Number of trees and shrubs per acre in 1967 and 1971 in the Utah juniper vegetation type in each pasture. Based on counts in 10 ft. wide permanent belt transects. Sample size was as follows: Poison Buttes and Oppenhiemer East, 9,850 sq. ft.; Oppenhiemer West, 9,900 sq. ft.; Pastures A, B, C and D, 10,000 sq. ft.

	Poison Buttes		Oppenhiemer				Powder Rim							
	1967	1971	East		West		Pasture A		Pasture B		Pasture C		Pasture D	
	1967	1971	1967	1971	1967	1971	1967	1971	1967	1971	1967	1971	1967	1971
Juos Mature	195	195	106	106	215	220	149	149	170	170	101	101	109	109
Young	13	22	9	13	9	9	48	48	44	44	9	9	22	22
Cemo Mature	734	743	371	380	532	532			437	441	1013	995	576	563
Young	18	40	243	234	180	154			175	113	576	406	4	22
Arno Mature	845	849	2189	2185	1936	1958	1846	1873					454	480
Young	0	40	128	318	4	18	0	26					345	380
Artr Mature	389	371	376	394	180	185	572	567	1004	1013	598	598	611	642
Young			18	18	0	145	4	39	118	122	31	31	92	79
Putr Mature	195	195	106	106	53	53	393	384	4	4			340	345
Young			9	22	0	4	0	4					4	22
Atco Mature									432	406	454	437	79	61
Young									524	371	375	336		
Grsp											0	4	4	9
Teca							52	70					9	26
Arfr													31	26
Syor							4	4						

Forage Utilization

Estimates of shrub utilization and utilization of new growth of grasses were made following winter and early spring grazing by sheep in the rest-rotation pastures. Estimates made at each sampling site are presented in Appendix C, Table 7. Utilization of big sagebrush by sheep ranged from 2 to 15 percent and averaged about 7 percent. Utilization of Nuttall saltbush ranged from 23 to 56 percent. At most sampling sites utilization of new grass growth was less than 10 percent although 50 percent of new Indian ricegrass growth was utilized at one site. Use of old grass was rated as heavy to moderate in Pasture D and light to moderate in Pastures A, B and C.

Taking advantage of good weather, cattle utilization determinations were made on 9 and 10 October, about 20 days before the end of the grazing season. This proved to be a fortunate choice as attempts to rerun utilization checks after the end of October were blocked by snow. Utilization of western wheatgrass on the various pastures during summer, 1971 is presented in Table 6. In Poison Buttes average utilization of western wheatgrass was 51 percent, 10 percent less than in 1970. Utilization of western wheatgrass in both Oppenhiemer pastures was less than in 1970. Much of this difference may have been due to changes in grazing patterns caused by dry reservoirs and the simultaneous use of both Oppenhiemer pastures.

In the rest-rotation units Pasture C was grazed season-long and utilization of western wheatgrass was 46 percent. In Pasture D, grazed

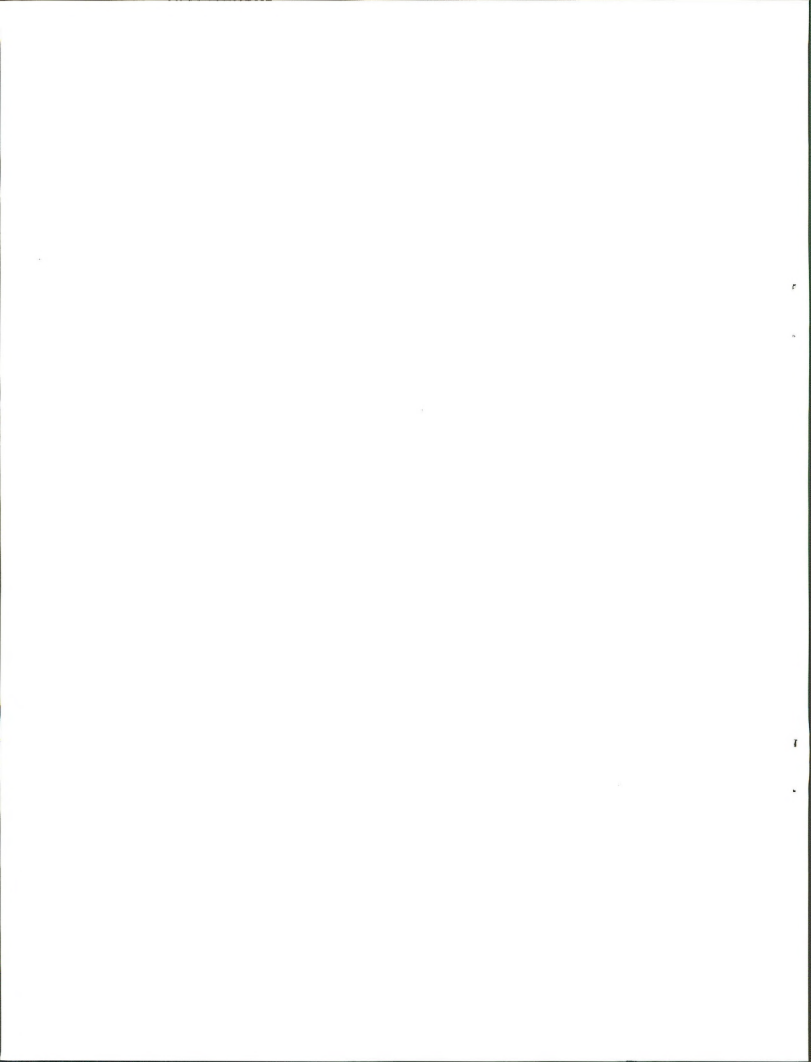


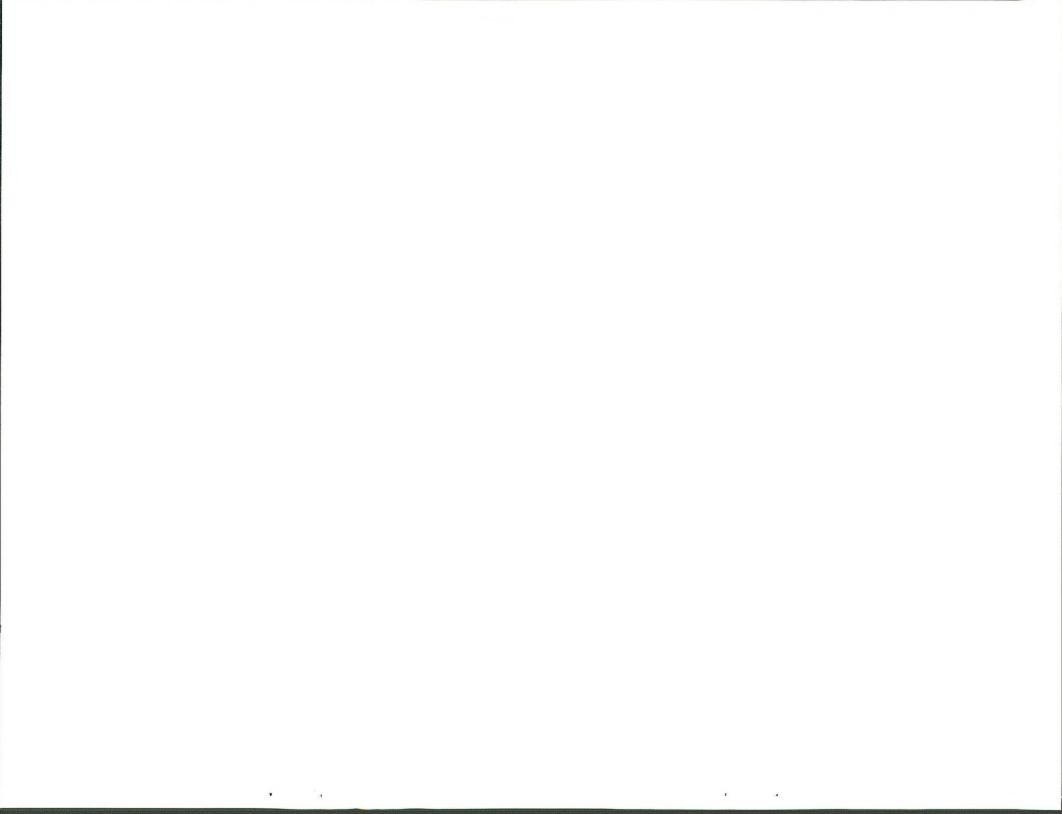
Table 6. Utilization of the key forage species (western wheatgrass) following grazing by cattle in summer 1971. Based on stem count method with counts made on 1' x 1' plots positioned along a permanent paced transect at each sampling site. Sampling was done on 9 and 10 October 1971.

Pasture	Grazing Period	Date of Sampling	Sampling Sites											Exc.I	Avg. ^{1/}
			C1-1	C2-1	C3-1	C4-1	C5-1	C6-1	C7-1	C8-1	C9-1	C10-1			
			Percent of Stems Grazed												
Poison Buttes	15 Apr.- 15 Nov.	10 Oct.	23	15	31	26	39	18	58	76	69	30	81	51	
Oppenhiemer East	1 May - 31 Sept.	9 Oct. & 10 Oct.	54	6	72	64	36	15	17	X	X	X	20	37	
Oppenhiemer West	1 May 31 Sept.	9 Oct. & 10 Oct.	71	36	46	10	NS	11	4	X	X	X	15	28	
Pasture C	1 May 31 Oct.	9 Oct.	51	60	9	18	27	87	X	X	X	X	70	46	
Pasture D	15 Jul.- 31 Oct.	9 Oct.	46	79	16	100	51	NS	NS	62	X	13	X	43	

^{1/} Averages were calculated from total stems counted in each pasture and are not averages of the sampling site percent utilization figures.

X - Site numbers not used.

NS - Site not sampled.



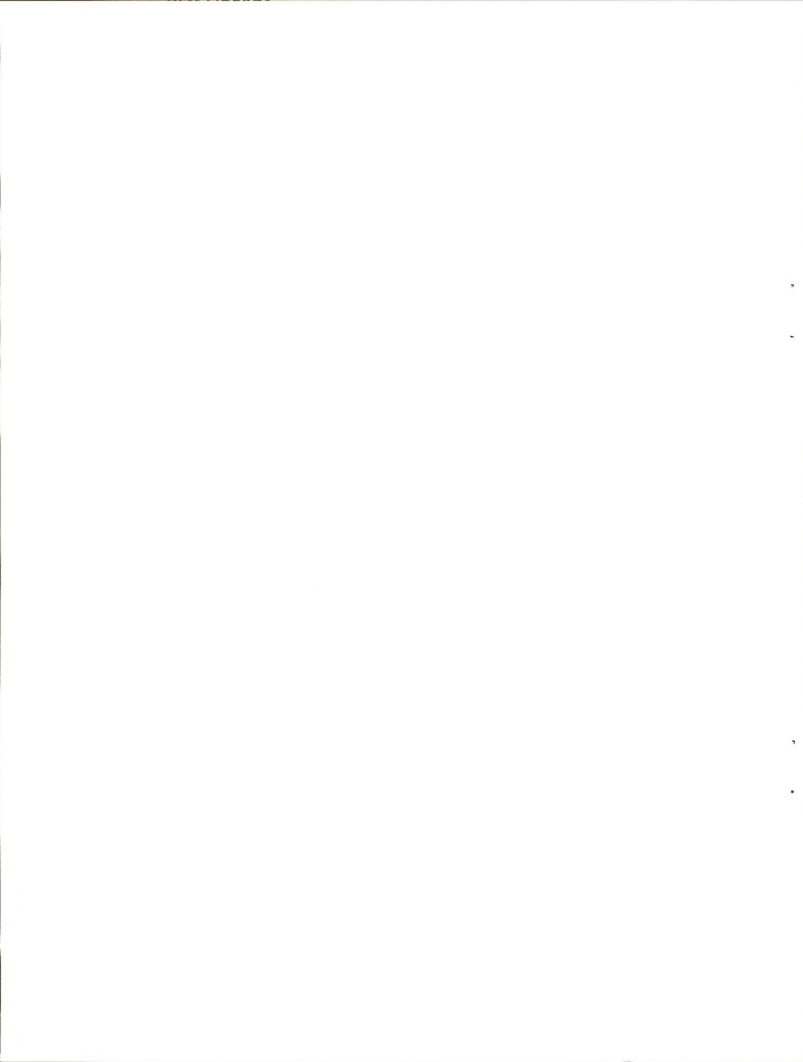
in the last half of the season, utilization of western wheatgrass averaged 43 percent. Utilization estimates for species other than western wheatgrass are presented in Appendix C, Table 8. Indian ricegrass and needle-andthread grass received moderate to heavy use.

During August, September and October there was some drift of cattle from Pasture D into Pasture B. As many as 30 head were observed in Pasture B on several occasions. Utilization checks were not made in Pasture B but use was obvious in local areas. This drift of animals lessened grazing pressure on the pastures (C & D) scheduled for grazing.

Wildlife Observations

A maximum count of 120 antelope was made during July. This was slightly more than the 115 animals counted in the previous summer and the difference was probably due to a greater number of fawns. For the first time antelope were observed in the Oppenhiemer West Pasture. Thus, during the five seasons of observation antelope have extended their area of use from the rest-rotation pastures to include all pastures in the study area.

In areas of winter deer concentration utilization of current twig growth of mountain mahogany ranged up to 90 percent. Resident deer were observed with some frequency but numbers appeared to be about the same as in previous years.



APPENDICES

POISON BUTTES ALLOTMENT

C1-1

Artr-Agsm Type
NE exp., 2° slope

5 July 1971

C2-1

Artr-Agsm Type
W exp., 3° slope

8 July 1971

	Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.		Cover & Avg.	Comp. % all G & F	Comp. % by Group	% Freq.
Artr	11.76			65	Artr	12.16			85
Shrub Total	11.76				Shrub Total	12.16			
Agsm	0.38	17.51	21.23	65	Agsm	1.05	42.33	54.13	90
Cael	0.91	41.95	50.83	75	Kocr	0.08	3.23	4.12	10
Orhy	0.01	0.46	0.56	5	Orhy	0.01	0.40	0.52	5
Pose	0.23	10.60	12.85	80	Pose	0.22	8.87	11.34	60
Sihy	0.03	1.38	1.68	25	Sihy	0.08	3.23	4.12	15
Stco	0.23	10.60	12.85	55	Stco	0.50	20.16	25.77	80
Grass Total	1.79	82.50	100.00		Grass Total	1.94	78.22	100.00	
Alac	0.01	0.46	2.63	10	Alac	0.01	0.40	1.85	10
Andi	0.02	0.92	5.26	15	Andi	0.03	1.21	5.56	10
Arabis spp.	0.01	0.46	2.63	5	Crepis spp.	0.03	1.21	5.56	25
Eren	0.04	1.84	10.53	35	Eren	0.02	0.81	3.70	15
Lofo	0.01	0.46	2.63	10	Oppo	0.20	8.06	37.03	10
Oppo	0.12	5.53	31.59	25	Phho	0.05	2.02	9.26	50
Phho	0.07	3.23	18.42	45	Phlo	0.05	2.02	9.26	45
Phlo	0.04	1.84	10.53	35	Spco	0.01	0.40	1.85	10
Spco	0.01	0.46	2.63	5	Trgy	0.02	0.81	3.70	20
Trgy	0.02	0.92	5.26	15	Alde	0.09	3.63	16.67	85
Alde	0.03	1.38	7.89	30	Unid.	0.03	1.21	5.56	25
Forb Total	0.38	17.50	100.00		Forb Total	0.54	21.78	100.00	
Grass and Forb Total	2.17	100.00			Grass and Forb Total	2.48	100.00		



POISON BUTTES ALLOTMENT

C3-1

Artr-Agsm-Oppo Type
SW exp., 3° slope

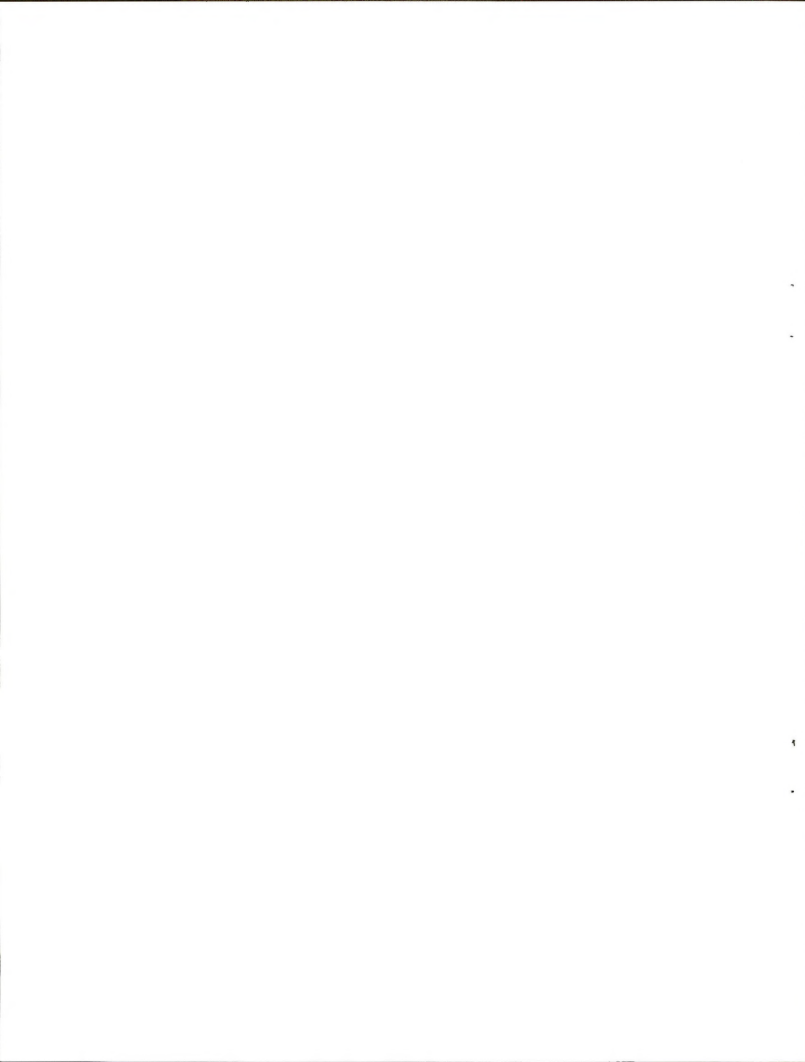
2 July 1971

C4-1

Artr-Agsm-Oppo Type
W exp., 3.5° slope

3 July 1971

	Cover %	Comp. % all G & F	Comp. % by Group	% Freq.		Cover %	Comp. % all G & F	Comp. % by Group	% Freq.
	Avg.					Avg.			
Artr	14.21			80	Artr	12.46			60
Shrub Total	14.21				Shrub Total	12.46			
Agsm	1.09	44.46		85	Agsm	1.71	48.97	75.34	100
Cael	0.11	4.49		20	Cael	0.01	0.29	0.44	5
Kocr	0.19	7.76		25	Kocr	0.06	1.72	2.64	10
Pofe	0.11	4.49		10	Pofe	0.21	6.02	9.25	10
Pose	0.07	2.86		50	Pose	0.18	5.16	7.93	80
Sihi	0.02	0.82		15	Sihi	0.02	0.57	0.88	15
Stco	0.13	5.31		10	Stco	0.08	2.29	3.52	10
Grass Total	1.72	70.19			Grass Total	2.27	65.02	100.00	
Andi	0.06	2.45		20	Alac	0.02	0.57	1.64	15
Crepis spp.	0.01	0.41		10	Andi	0.11	3.15	9.02	15
Eren	0.02	0.82		15	Arabis spp.	0.01	0.29	0.82	5
Lofo	0.02	0.82		15	Crepis spp.	0.05	1.43	4.10	50
Oppo	0.42	17.14		35	Eren	0.04	1.15	3.28	35
Phho	0.05	2.04		50	Erov	0.03	0.86	2.46	5
Phlo	0.02	0.82		20	Oppo	0.73	20.92	59.82	45
Spco	0.01	0.41		10	Phho	0.01	0.29	0.82	10
Trgy	0.01	0.41		10	Phlo	0.03	0.86	2.46	25
Alde	0.10	4.08		95	Spco	0.01	0.29	0.82	5
Unid.	0.01	0.41		5	Trgy	0.03	0.86	2.46	25
Forb Total	0.73	29.81			Alde	0.09	2.58	7.38	90
Grass and Forb Total	2.45	100.00			Cora	0.01	0.29	0.82	5
					Lare	0.01	0.29	0.82	10
					Unid.	0.04	1.15	3.28	35
					Forb Total	1.22	34.98	100.00	
					Grass and Forb Total	3.49	100.00		



POISON BUTTES ALLOTMENT

C5-1

Artr-Agsm Type
E exp., 0.5° slope

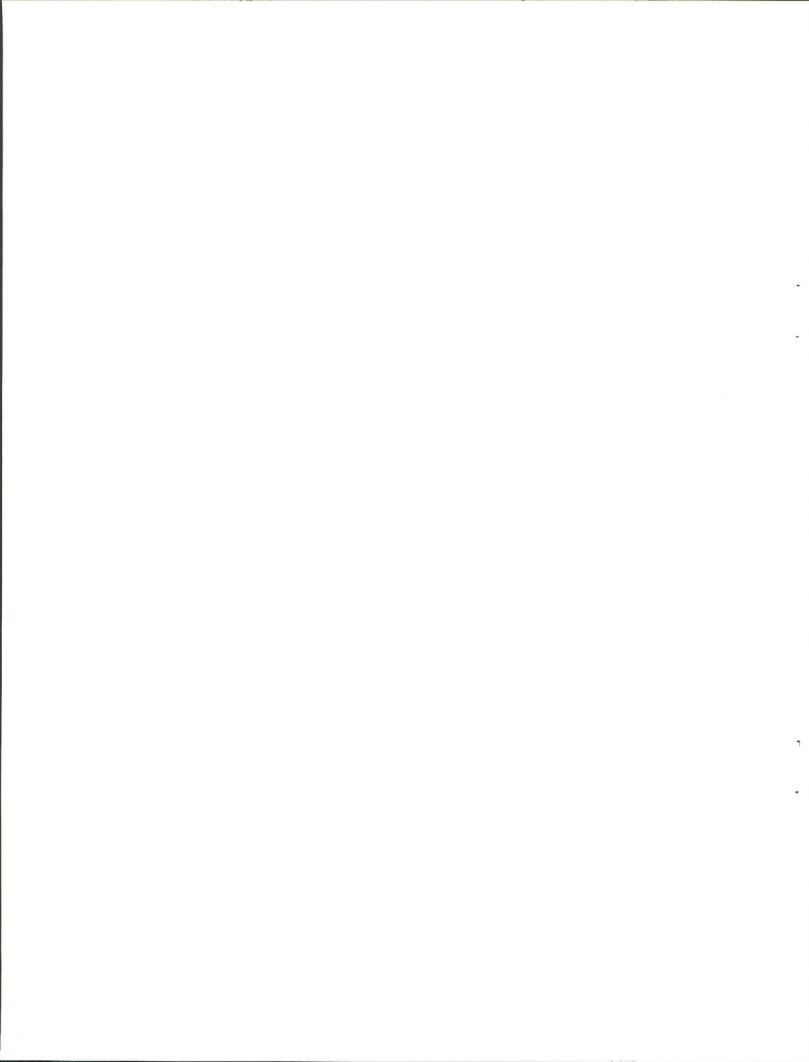
3 July 1971

C6-1

Artr-Agsm Type
E exp., 0.5° slope

3 July 1971

	Cover %	Comp. % all G & F	Comp. % by Group	% Freq.		Cover %	Comp. % all G & F	Comp. % by Group	% Freq.
Arsp	1.25			15	Artr	14.61			80
Artr	7.50			35	Eula	0.07			20
Atga	2.51			20	Juos	0.10			5
Chvi	0.03			5					
Shrub Total	11.29				Shrub Total	14.78			
Agsm	1.14	47.50	72.16	65	Agsm	1.20	60.00	78.95	75
Orhy	0.11	4.58	6.96	10	Pofe	0.23	11.50	15.13	20
Pose	0.28	11.67	17.72	60	Pose	0.08	4.00	5.26	60
Sihy	0.05	2.08	3.16	25	Sihy	0.01	0.50	0.66	5
Grass Total	1.58		100.00		Grass Total	1.52	76.00	100.00	
Alac	0.03	1.25	3.66	25	Alac	0.03	1.50	6.25	25
Andi	0.40	16.67	48.77	5	Andi	0.11	5.50	22.91	20
Arabis spp.	0.01	0.42	1.22	5	Arabis spp.	0.01	0.50	2.08	10
Crepis spp.	0.01	0.42	1.22	10	Crepis spp.	0.02	1.00	4.17	15
Eren	0.02	0.83	2.44	15	Eren	0.04	2.00	8.33	35
Lofo	0.03	1.25	3.66	30	Lofo	0.02	1.00	4.17	20
Oppo	0.15	6.25	18.29	5	Oppo	0.01	0.50	2.08	5
Phho	0.05	2.08	6.10	25	Phho	0.05	2.50	10.42	50
Phlo	0.04	1.67	4.88	35	Phlo	0.03	1.50	6.25	25
Trgy	0.02	0.83	2.44	20	Trgy	0.03	1.50	6.25	30
Alde	0.05	2.08	6.10	45	Alde	0.05	2.50	10.42	45
Lare	0.01	0.42	1.22	5	Gypa	0.01	0.50	2.08	5
Forb Total	0.82	34.17	100.00		Lise	0.03	1.50	6.25	30
Grass and					Migr	0.02	1.00	4.17	15
Forb Total	2.40	100.00			Oean	0.02	1.00	4.17	20
					Forb Total	0.48	24.00	100.00	
					Grass and				
					Forb Total	2.00	100.00		



POISON BUTTES ALLOTMENT

C7-1

Artr-Agsm Type Sprayed
N exp., 2° slope

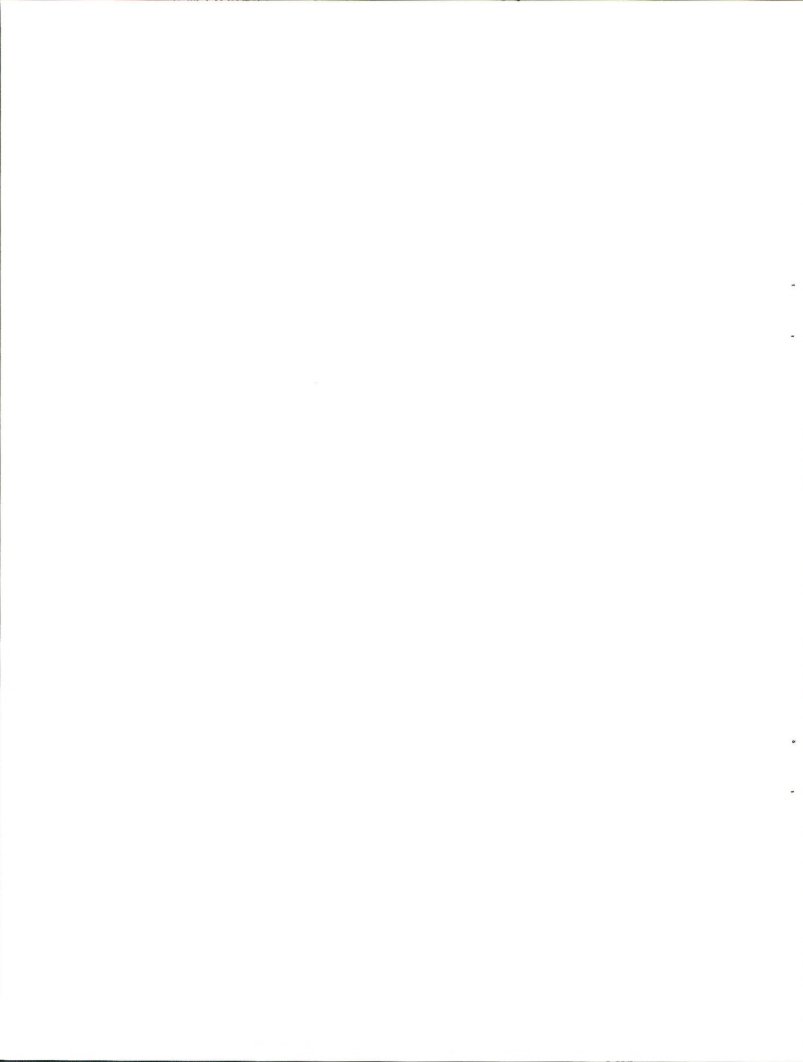
22 June 1971

C8-1

Artr-Agsm Type Sprayed
NE exp., 0.5° slope

22 June 1971

	Cover %	Comp. % all G & F	Comp. % by Group	% Freq.		Cover %	Comp. % all G & F	Comp. % by Group	% Freq.
Shrub Total	0.00				Artr	3.31			20
Agsm	3.35	59.46	64.17	100	Shrub Total	3.31			
Kocr	0.88	15.63	16.86	55	Agsm	4.38	68.70	77.26	100
Pofe	0.50	8.88	9.58	55	Kocr	0.13	2.04	2.29	20
Pose	0.44	7.82	8.43	95	Pofe	0.24	3.77	4.23	50
Sihy	0.05	0.89	0.96	30	Pose	0.55	8.63	9.70	100
Grass Total	5.22	92.68	100.00		Sihy	0.21	3.30	3.70	50
Alac	0.02	0.36	4.88	20	Stco	0.16	2.51	2.82	20
Arabis spp.	0.01	0.18	2.44	5	Grass Total	5.67	88.95	100.00	
Crepis spp.	0.01	0.18	2.44	5	Alac	0.06	0.94	8.57	55
Eren	0.03	0.53	7.32	30	Andi	0.03	0.47	4.29	10
Lofe	0.01	0.18	2.44	5	Asdr	0.01	0.17	1.43	5
Oppo	0.10	1.78	24.37	5	Eren	0.01	0.17	1.43	10
Phho	0.02	0.36	4.88	15	Lofe	0.02	0.31	2.86	15
Phlo	0.04	0.71	9.76	35	Phlo	0.01	0.17	1.43	10
Trgy	0.01	0.18	2.44	10	Trgy	0.02	0.31	2.86	20
Alde	0.01	0.18	2.44	5	Alde	0.10	1.57	14.28	100
Chat	0.01	0.18	2.44	5	Chat	0.01	0.17	1.43	5
Copa	0.02	0.36	4.88	20	Copa	0.04	0.63	5.71	35
Lise	0.01	0.18	2.44	5	Gora	0.01	0.17	1.43	10
Migr	0.09	1.60	21.95	90	Gypa	0.09	1.41	12.86	85
Posa	0.02	0.36	4.88	20	Lise	0.07	1.10	10.00	70
Forb Total	0.41	7.32	100.00		Migr	0.04	0.63	5.71	35
Grass and Forb Total	5.63	100.00			Oean	0.08	1.26	11.43	75
					Posa	0.10	1.57	14.28	95
					Forb Total	0.70	11.05	100.00	
					Grass and Forb Total	6.37	100.00		



POISON BUTTES ALLOTMENT

C9-1

C10-1

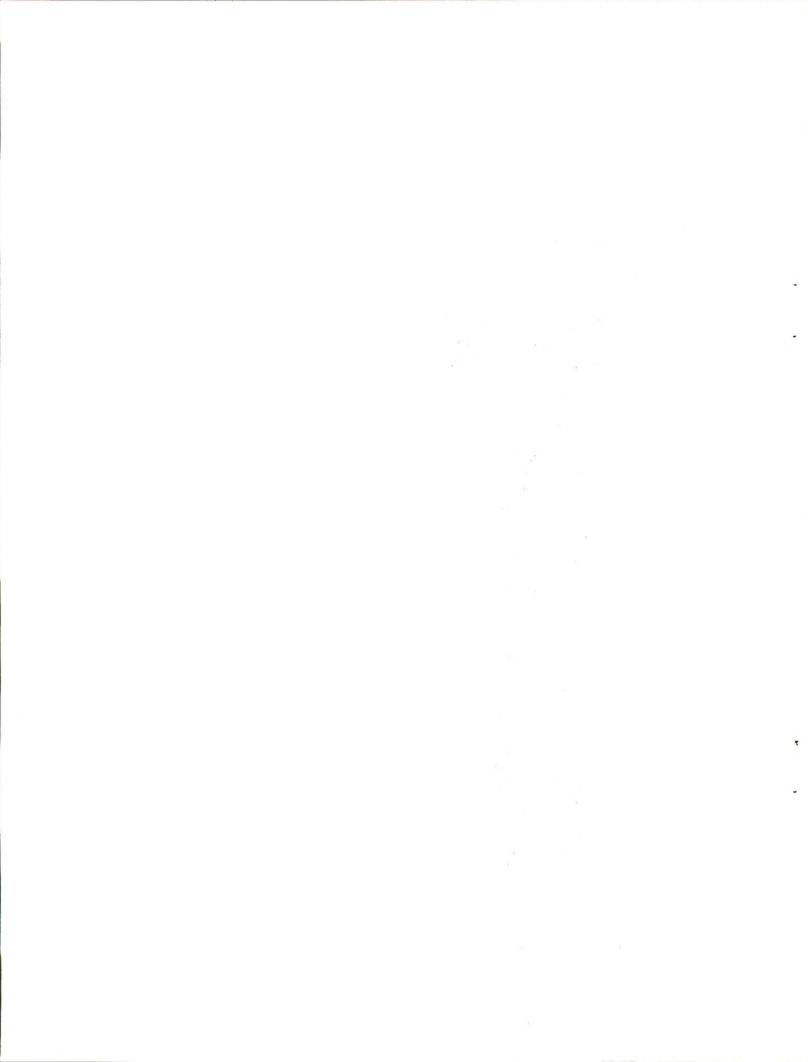
Artr-Agsm Type
N exp., 1° slope

Artr-Agsm Type
SE exp., 3° slope

22 June 1971

5 July 1971

	Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.		Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.
Artr	5.56			85	Artr	11.96			70
Shrub Total	5.56				Shrub Total	11.96			
Agsm	2.16	52.69		95	Agsm	0.51	45.54	69.86	40
Kocr	0.16	3.90		25	Pose	0.17	15.18	23.29	40
Orhy	0.03	0.73		5	Sihi	0.03	2.68	4.11	10
Fofe	0.39	9.51		40	Brte	0.02	1.79	2.74	20
Pose	0.31	7.56		90	Grass Total	0.73	65.19	100.00	
Sihi	0.12	2.93		30	Alac	0.02	1.79	5.13	15
Stco	0.21	5.12		30	Andi	0.05	4.46	12.82	5
Grass Total	3.38	82.44			Crepis spp.	0.01	0.89	2.56	5
Aggl	0.02	0.49		15	Eren	0.04	3.57	10.26	40
Alac	0.06	1.46		55	Lofo	0.01	0.89	2.56	10
Andi	0.11	2.68		20	Oppo	0.08	7.14	20.51	10
Asci	0.01	0.24		5	Phho	0.01	0.89	2.56	5
Eren	0.05	1.22		50	Phlo	0.04	3.57	10.26	40
Lofo	0.01	0.24		5	Spco	0.01	0.89	2.56	5
Oppo	0.10	2.44		5	Trgy	0.02	1.79	5.13	15
Phho	0.02	0.49		15	Alde	0.10	8.93	25.65	100
Phlo	0.02	0.49		15	Forb Total	0.39	34.81	100.00	
Trgy	0.06	1.46		55	Grass and				
Alde	0.02	0.49		20	Forb Total	1.12	100.00		
Cora	0.02	0.49		15					
Gypa	0.04	0.98		40					
Lise	0.04	0.98		35					
Migr	0.08	1.95		75					
Posa	0.06	1.46		55					
Forb Total	0.72	17.56							
Grass and									
Forb Total	4.10	100.00							



POISON BUTTES ALLOTMENT

Exclosure I

Artir-Agsm Type - Sprayed
NE exp., 3° slope

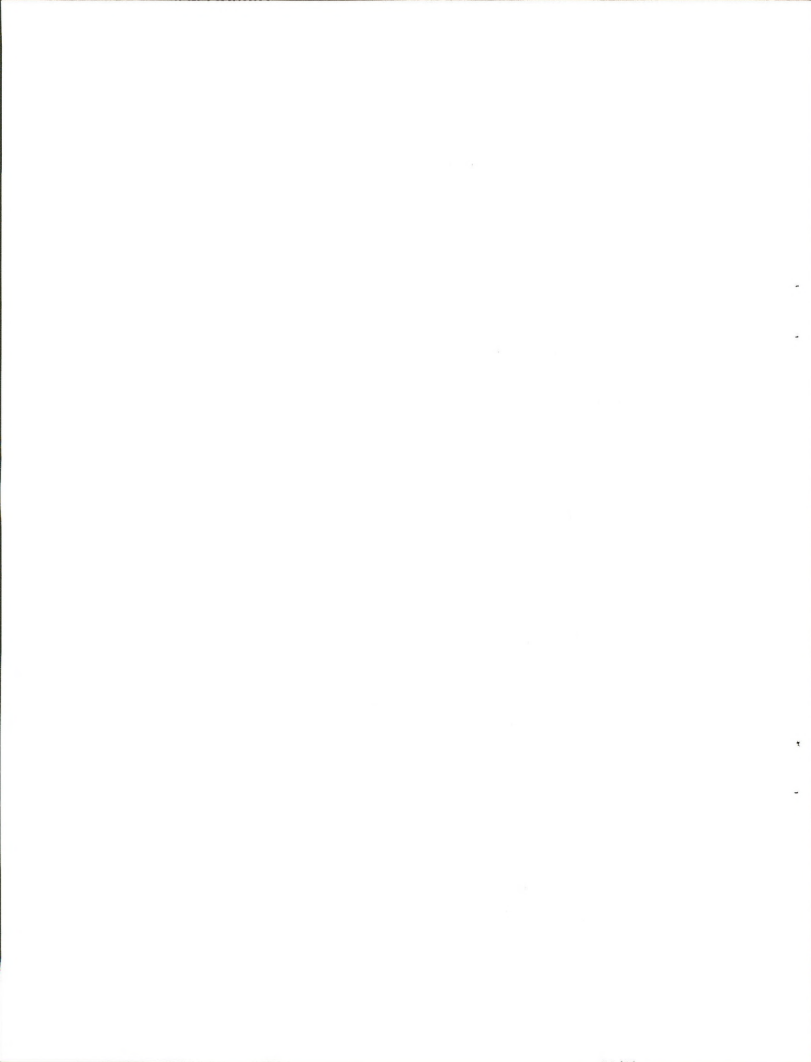
Outside

Inside

23 June 1971

23 June 1971

	Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.		Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.
Artir	7.38			65	Artir	1.76			35
Shrub Total	7.38				Shrub Total	1.76			
Agsm	3.03	62.58	71.97	100	Agsm	4.48	65.38	69.89	95
Kocr	0.27	5.58	6.41	45	Gael	0.10	1.46	1.56	10
Pofe	0.44	9.09	10.45	40	Kocr	0.08	1.17	1.25	15
Pose	0.25	5.17	5.94	55	Pofe	0.95	13.87	14.82	80
Sihiy	0.21	4.34	4.99	55	Pose	0.39	5.69	6.08	85
Stco	0.01	0.21	0.24	5	Sihiy	0.36	5.26	5.62	65
					Stco	0.05	0.73	0.78	25
Grass Total	4.21	86.97	100.00		Grass Total	6.41	93.56	100.00	
Alac	0.07	1.45	11.11	70	Alac	0.05	0.73	11.36	50
Andi	0.03	0.62	4.76	5	Arabis spp.	0.03	0.44	6.82	25
Asci	0.02	0.41	3.17	15	Asci	0.01	0.15	2.27	5
Asdr	0.01	0.21	1.59	5	Eren	0.01	0.15	2.27	5
Eren	0.01	0.21	1.59	10	Oppo	0.05	0.73	11.36	5
Phlo	0.02	0.41	3.17	15	Phlo	0.01	0.15	2.27	5
Trey	0.07	1.45	11.11	65	Trey	0.02	0.29	4.55	15
Alde	0.05	1.03	7.94	45	Alde	0.03	0.44	6.82	30
Chat	0.01	0.21	1.59	5	Chat	0.01	0.15	2.27	5
Copa	0.07	1.45	11.11	70	Copa	0.01	0.15	2.27	10
Cora	0.01	0.21	1.59	5	Cora	0.01	0.15	2.27	5
Gypa	0.05	1.03	7.94	50	Gypa	0.04	0.58	9.09	35
Lise	0.01	0.21	1.59	5	Lise	0.04	0.58	9.09	35
Migr	0.08	1.65	12.70	75	Migr	0.03	0.44	6.82	30
Oean	0.03	0.62	4.76	25	Posa	0.09	1.31	20.47	90
Posa	0.09	1.86	14.28	90					
Forb Total	0.63	13.03	100.00		Forb Total	0.44	6.44	100.00	
Grass and Forb Total	4.84	100.00			Grass and Forb Total	6.85	100.00		



POISON BUTTES ALLOTMENT

Exclosure II

Livestock Exclusion Part

Juos Type

E SE exp., 3-13° slope

Inside Tr. 1

Inside Tr. 2

15 July 1971

15 July 1971

	Cover %	Comp. % all	Comp. % by			Cover %	Comp. % all	Comp. % by	
	Avg.	G & F	Group	Freq.		Avg.	G & F	Group	Freq.
Artr	11.96			65	Artr	9.45			55
Juos	9.00			10	Juos	17.50			30
Shrub Total	20.96				Shrub Total	26.95			
Agsm	0.14	14.43	16.09	20	Agsm	0.01	1.82	3.23	5
Cafi	0.01	1.03	1.15	5	Agsp	0.03	5.45	9.68	5
Kocr	0.03	3.09	3.45	5	Pofe	0.08	14.55	25.81	10
Pofe	0.56	57.75	64.37	20	Pose	0.01	1.82	3.23	10
Pose	0.11	11.34	12.64	15	Sihi	0.18	32.72	58.05	25
Sihi	0.01	1.03	1.15	10					
Stco	0.01	1.03	1.15	10	Grass Total	0.31	56.36	100.00	
Grass Total	0.87	89.70	100.00		Andi	0.01	1.82	4.17	5
Arabis spp.	0.01	1.03	10.00	5	Arabis spp.	0.01	1.82	4.17	5
Phho	0.02	2.06	20.00	15	Arfe	0.01	1.82	4.17	5
Alde	0.05	5.15	50.00	50	Crfe	0.10	18.18	41.65	5
Depi	0.01	1.03	10.00	5	Eren	0.01	1.82	4.17	10
Gisi	0.01	1.03	10.00	10	Phho	0.02	3.64	8.33	20
Forb Total	0.10	10.30	100.00		Trgy	0.01	1.82	4.17	10
Grass and					Alde	0.04	7.27	16.67	35
Forb Total	0.97	100.00			Gisi	0.03	5.45	12.50	30
					Forb Total	0.24	43.64	100.00	
					Grass and				
					Forb Total	0.55	100.00		



POISON BUTTES ALLOTMENT

Exclosure II

Livestock Exclusion Part

Juos Type

E SE exp., 3-13° slope

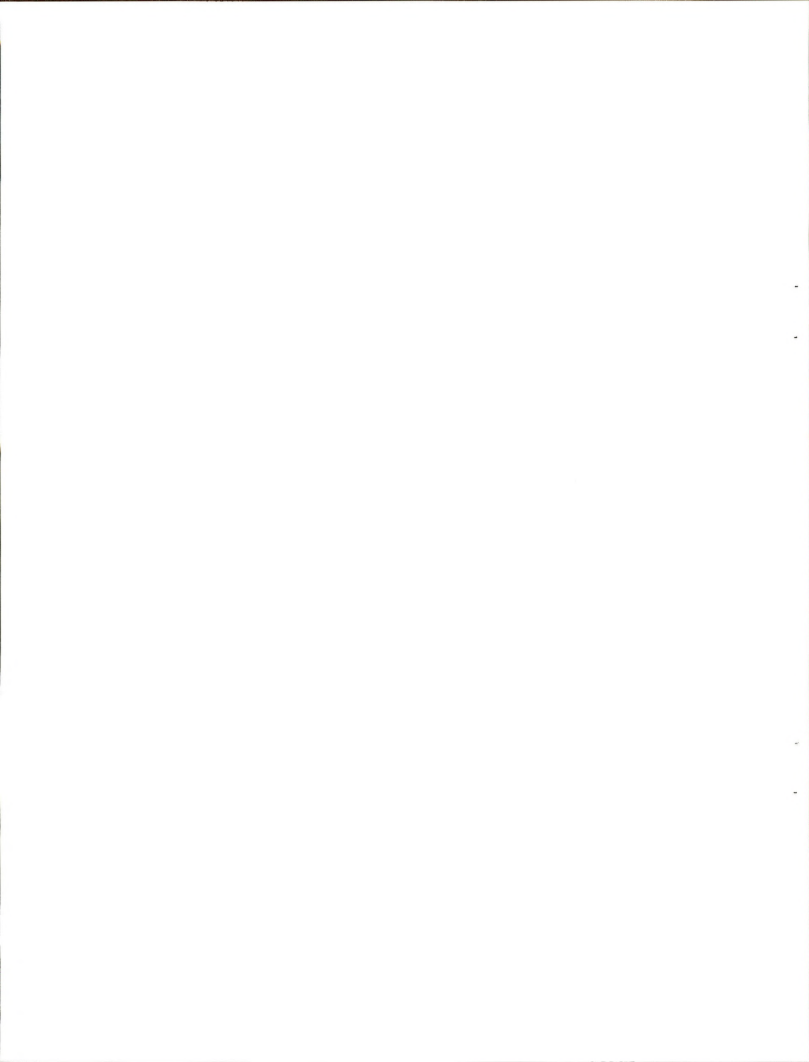
Outside Tr. 1

Outside Tr. 2

16 July 1971

16 July 1971

	Cover %	Comp. % all G & F	Comp. % by Group	% Freq.		Cover %	Comp. % all G & F	Comp. % by Group	% Freq.
	Avg.					Avg.			
Artr	5.65			40	Artr	10.55			50
Juos	22.76			25	Juos	22.50			30
Shrub Total	28.41				Shrub Total	33.05			
Agsm	0.98	48.72	58.69	60	Agsm	0.03	2.94	3.85	5
Agsp	0.08	3.98	4.79	5	Cafi	0.01	0.98	1.28	5
Kocr	0.08	3.98	4.79	5	Orhy	0.02	1.96	2.56	15
Orhy	0.13	6.47	7.78	15	Pofe	0.13	12.75	16.67	15
Pofe	0.18	8.96	10.78	20	Pose	0.05	4.90	6.41	5
Pose	0.06	2.99	3.59	20	Sihy	0.53	51.97	67.95	45
Stco	0.15	7.46	8.98	10	Brte	0.01	0.98	1.28	5
Brte	0.01	0.50	0.60	5					
Grass Total	1.67	83.06	100.00		Grass Total	0.78	76.48	100.00	
Andi	0.13	6.47	38.23	10	Andi	0.10	9.80	41.66	5
Arfe	0.02	1.00	5.88	15	Arabis spp.	0.01	0.98	4.17	5
Asdi	0.01	0.50	2.94	10	Crfe	0.02	1.96	8.33	15
Oppo	0.05	2.49	14.71	5	Eren	0.01	0.98	4.17	5
Phho	0.01	0.50	2.94	5	Oppo	0.03	2.94	12.50	5
Phlo	0.05	2.49	14.71	45	Phho	0.01	0.98	4.17	10
Trgy	0.01	0.50	2.94	10	Alde	0.03	2.94	12.50	30
Alde	0.05	2.49	14.71	50	Crwa	0.01	0.98	4.17	10
Chat	0.01	0.50	2.94	5	Gisi	0.02	1.96	8.33	15
Forb Total	0.34	16.94	100.00		Forb Total	0.24	23.52	100.00	
Grass and Forb Total	2.01	100.00			Grass and Forb Total	1.02	100.00		



POISON BUTTES ALLOTMENT

Exclosure II

Game & Livestock Exclusion Part

Juos Type

W WS exp., 13° slope

Outside Tr. 1

Outside Tr. 2

16 July 1971

16 July 1971

	Cover %	Comp. % all	Comp. % by			Cover %	Comp. % all	Comp. % by	
	Avg.	G & F	Group	Freq.		Avg.	G & F	Group	Freq.
Arno	5.21			50	Arno	1.06			30
Juos	42.50			55	Cemo	0.35			5
					Juos	40.00			40
Shrub Total	47.71				Shrub Total	41.41			
Agsp	0.60	37.02	47.24	45	Agsp	0.35	20.00	31.82	20
Gafi	0.08	4.94	6.30	5	Hija	0.05	2.86	4.55	5
Kocr	0.09	5.56	7.09	20	Kocr	0.03	1.71	2.73	5
Pofe	0.46	28.40	36.22	30	Orhy	0.40	22.89	36.35	15
Pose	0.04	2.47	3.15	15	Pofe	0.11	6.29	10.00	10
Grass Total	1.27	78.39	100.00		Pose	0.16	9.14	14.55	25
Andi	0.01	0.62	2.86	5	Grass Total	1.10	62.89	100.00	
Arabis spp.	0.01	0.62	2.86	5	Andi	0.01	0.57	1.54	5
Arfe	0.03	1.85	8.57	25	Arabis spp.	0.01	0.57	1.54	5
Asdi	0.03	1.85	8.57	30	Arfe	0.10	5.71	15.38	25
Erea	0.01	0.62	2.86	10	Crfe	0.05	2.86	7.69	5
Oppo	0.15	9.26	42.85	10	Erum	0.03	1.71	4.62	5
Phho	0.03	1.85	8.57	25	Haac	0.30	17.14	46.13	15
Phlo	0.02	1.23	5.71	20	Oppo	0.02	1.14	3.08	15
Chat	0.01	0.62	2.86	10	Phau	0.01	0.57	1.54	5
Chfr	0.01	0.62	2.86	10	Phho	0.03	1.71	4.62	25
Cora	0.01	0.62	2.86	10	Trgy	0.01	0.57	1.54	5
Crwa	0.02	1.23	5.71	20	Alde	0.02	1.14	3.08	15
Meal	0.01	0.62	2.86	5	Chfr	0.01	0.57	1.54	10
Forb Total	0.35	21.61	100.00		Crwa	0.03	1.71	4.62	25
Grass and					Dapi	0.01	0.57	1.54	5
Forb Total	1.62	100.00			Gisi	0.01	0.57	1.54	10
					Forb Total	0.65	37.11	100.00	
					Grass and				
					Forb Total	1.75			

POISON BUTTES ALLOTMENT

Exclosure II

Game and Livestock Exclusion Part

Juos Type
W WS exp., 13⁰ slope

Inside Tr. 1

Inside Tr. 2

17 July 1971

17 July 1971

	Cover %	Comp. % all	Comp. % by			Cover %	Comp. % all	Comp. % by	
	Avg.	G & F	Group	% Freq.		Avg.	G & F	Group	% Freq.
Arno	1.41			25	Arno	1.50			10
Cemo	2.50			10	Cemo	5.03			15
Juos	11.25			15	Juos	20.00			25
Shrub Total	15.16				Shrub Total	26.53			
Agsm	0.10	7.14	9.43	10	Agsm	0.12	7.74	10.00	25
Agsp	0.37	26.45	34.91	40	Agsp	0.03	1.94	2.50	5
Cafi	0.30	21.44	28.30	5	Cafi	0.25	16.13	20.83	5
Pofe	0.23	16.44	21.70	10	Orhy	0.39	25.12	32.50	20
Pose	0.05	3.57	4.72	5	Pofe	0.31	20.00	25.84	20
Brite	0.01	0.71	0.94	5	Pose	0.10	6.45	8.33	15
Grass Total	1.06	75.75	100.00		Grass Total	1.20	77.38	100.00	
Arfe	0.03	2.14	8.82	30	Asdi	0.02	1.29	5.71	15
Asdi	0.02	1.43	5.88	20	Aste	0.01	0.65	2.86	5
Aste	0.02	1.43	5.88	15	Grfc	0.01	0.65	2.86	5
Crepis spp.	0.01	0.71	2.94	5	Erum	0.02	1.29	5.71	15
Grfc	0.01	0.71	2.94	5	Oppo	0.20	12.90	57.13	5
Erum	0.03	2.14	8.82	10	Phav	0.01	0.65	2.86	5
Haac	0.03	2.14	8.82	5	Phho	0.01	0.65	2.86	10
Oppo	0.10	7.14	29.44	5	Phlo	0.01	0.65	2.86	5
Pefr	0.01	0.71	2.94	5	Trgy	0.01	0.65	2.86	5
Phho	0.03	2.14	8.82	35	Alde	0.01	0.65	2.86	5
Trgy	0.01	0.71	2.94	5	Chfr	0.01	0.65	2.86	10
Alde	0.03	2.14	8.82	25	Grwa	0.02	1.29	5.71	15
Depi	0.01	0.71	2.94	5	Gicd	0.01	0.65	2.86	5
Forb Total	0.34	24.25	100.00		Forb Total	0.35	22.62	100.00	
Grass and					Grass and				
Forb Total	1.40	100.00			Forb Total	1.55	100.00		

OPPENHIEMER ALLOTMENT - EAST PASTURE

C1-1

Artr-Agsm-Oppo Type
SW exp., 3° slope

2 July 1971

C2-1

Artr-Agsm Type
SW exp., 3° slope

2 July 1971

	Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.		Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.
Artr	3.23			40	Artr	8.01			65
Shrub Total	3.23				Shrub Total	8.01			
Agsm	1.77	43.31	71.66	95	Agsm	0.33	28.23	63.47	70
Cael	0.16	3.91	6.48	15	Pose	0.16	13.68	30.77	60
Orhy	0.01	0.24	0.40	5	Sihy	0.01	0.85	1.92	10
Pose	0.07	1.71	2.83	45	Stco	0.01	0.85	1.92	5
Sihy	0.08	1.96	3.24	15	Brte	0.01	0.85	1.92	10
Stco	0.34	8.31	13.77	40	Grass Total	0.52	44.46	100.00	
Brte	0.04	0.98	1.62	40	Alte	0.02	1.71	3.08	20
Grass Total	2.47	60.42	100.00		Andi	0.04	3.42	6.15	15
Alac	0.04	0.98	2.47	35	Arabis spp.	0.01	0.85	1.54	5
Andi	0.01	0.24	0.62	5	Eren	0.03	2.56	4.62	30
Erev	0.01	0.24	0.62	5	Erov	0.03	2.56	4.62	5
Lofo	0.02	0.49	1.23	15	Haac	0.10	8.55	15.38	5
Oppo	1.38	33.74	85.17	70	Lofo	0.01	0.85	1.54	10
Phlo	0.02	0.49	1.23	20	Oppo	0.23	19.66	35.38	10
Spco	0.01	0.24	0.62	5	Phho	0.05	4.27	7.69	50
Trgy	0.01	0.24	0.62	5	Phlo	0.05	4.27	7.69	50
Alde	0.09	2.20	5.56	90	Spco	0.02	1.71	3.08	15
Chat	0.01	0.24	0.62	5	Trgy	0.04	3.42	6.15	35
Dapi	0.01	0.24	0.62	5	Alde	0.02	1.71	3.08	20
Gara	0.01	0.24	0.62	5	Forb Total	0.65	55.54	100.00	
Forb Total	1.62	39.58	100.00		Grass and Forb Total	1.17	100.00		
Grass and Forb Total	4.09	100.00							

OPPENHIEMER ALLOTMENT - EAST PASTURE

C3-1

Artr-Agsm Type - Sprayed
N exp., 3° slope

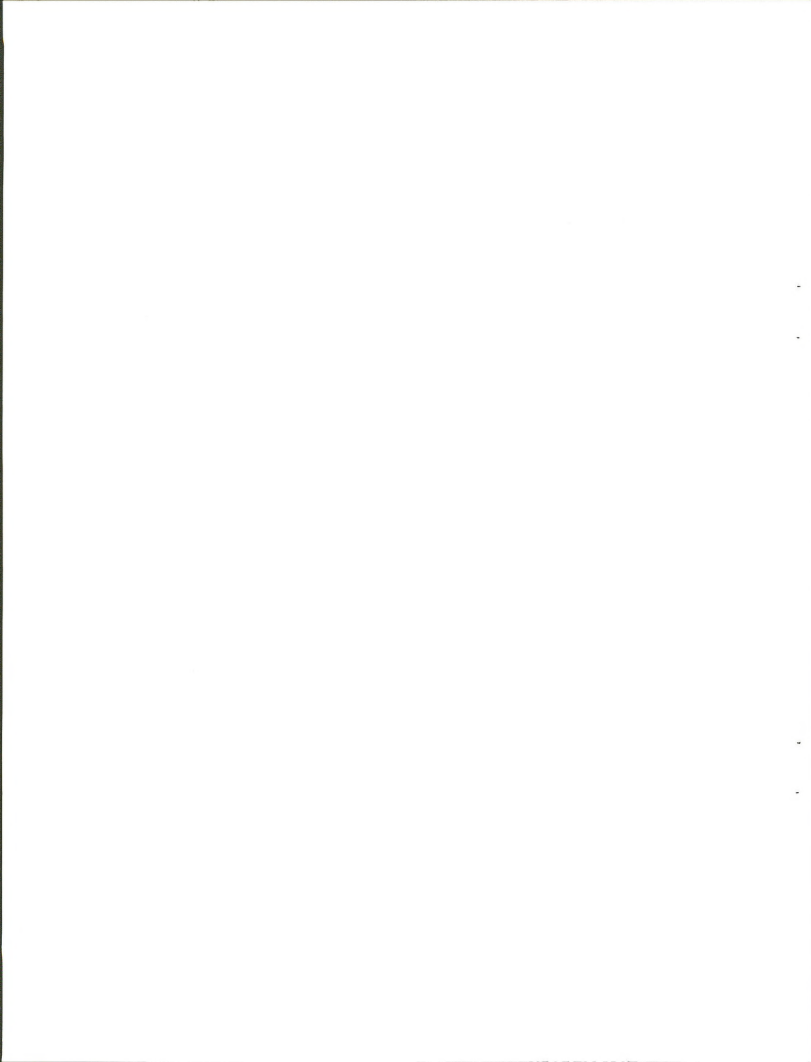
2 July 1971

C4-1

Artr-Agsm Type
SW exp., 0.5° slope

3 July 1971

	Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.		Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.
Artr	0.80			10	Artr	8.82			70
Shrub Total	0.80				Shrub Total	8.82			
Agsm	2.66	75.36	79.88	80	Agsm	0.79	33.90	51.97	55
Cael	0.06	1.70	1.80	15	Kocr	0.01	0.43	0.66	5
Pose	0.33	9.35	9.91	90	Pose	0.51	21.88	33.55	75
Sihiy	0.21	5.95	6.31	55	Sihiy	0.06	2.58	3.95	20
Brite	0.07	1.98	2.10	20	Stco	0.15	6.44	9.87	15
Grass Total	3.33	94.34	100.00		Grass Total	1.52	65.23	100.00	
Alac	0.02	0.57	10.00	15	Andi	0.13	5.58	16.05	15
Crepis spp.	0.01	0.28	5.00	10	Arabis spp.	0.01	0.43	1.23	5
Eren	0.06	1.70	30.00	55	Aspu	0.01	0.43	1.23	5
Oppo	0.03	0.85	15.00	5	Eren	0.04	1.72	4.94	40
Phho	0.01	0.28	5.00	10	Erov	0.03	1.29	3.70	10
Phlo	0.02	0.57	10.00	15	Oppo	0.41	17.60	50.63	30
Maca	0.01	0.28	5.00	10	Phho	0.08	3.43	9.88	80
Chat	0.02	0.57	10.00	20	Spcu	0.01	0.43	1.23	10
Crke	0.01	0.28	5.00	10	Alde	0.09	3.86	11.11	90
Gara	0.01	0.28	5.00	10					
Forb Total	0.20	5.66	100.00		Forb Total	0.81	34.77	100.00	
Grass and Forb Total	3.53	100.00			Grass and Forb Total	2.33	100.00		



OPPENHIEMER ALLOTMENT - EAST PASTURE

C5-1

C6-1

Artr-Agsm Type - Sprayed
NE exp., 0.5° slope

Artr-Agsm Type - Sprayed
N NE exp., 1.5° slope

30 June 1971

30 June 1971

	Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.		Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.
Artr	10.21			55	Artr	6.08			35
Shrub Total	10.21				Shrub Total	6.08			
Agsm	1.64	64.31	75.94	95	Agsm	1.06	52.71	68.38	90
Pofe	0.13	5.10	6.01	15	Orhy	0.13	6.47	8.39	5
Pose	0.32	12.55	14.81	70	Pose	0.33	16.42	21.29	85
Sihiy	0.07	2.75	3.24	20	Sihiy	0.03	1.49	1.94	10
Grass Total	2.16	84.71	100.00		Grass Total	1.55	77.09	100.00	
Alac	0.01	0.39	2.56	10	Andi	0.05	2.49	10.87	5
Andi	0.01	0.39	2.56	5	Aspu	0.01	0.50	2.17	5
Arabis spp.	0.01	0.39	2.56	10	Eren	0.05	2.49	10.87	45
Crepis spp.	0.03	1.18	7.69	30	Lofo	0.02	1.00	4.35	15
Eren	0.03	1.18	7.69	25	Oppo	0.21	10.45	45.66	20
Lofo	0.01	0.39	2.56	5	Phho	0.05	2.49	10.87	45
Oppo	0.10	3.92	25.70	5	Phlo	0.04	1.99	8.70	40
Phho	0.03	1.18	7.69	25	Trgy	0.01	0.50	2.17	10
Phlo	0.04	1.57	10.25	40	Alde	0.01	0.50	2.17	5
Trgy	0.01	0.39	2.56	5	Lare	0.01	0.50	2.17	5
Alde	0.03	1.18	7.69	30					
Chat	0.01	0.39	2.56	5	Forb Total	0.46	22.91	100.00	
Cora	0.03	1.18	7.69	25					
Lare	0.02	0.78	5.12	20	Grass and				
Lise	0.01	0.39	2.56	5	Forb Total	2.01	100.00		
Unid.	0.01	0.39	2.56	5					
Forb Total	0.39	15.29	100.00						
Grass and									
Forb Total	2.55	100.00							

OPPENHIEMER ALLOTMENT - EAST PASTURE

C7-1

C8-1

Artr-Agsm Type
E exp., 0.25° slope

Juos Type
S exp., 10° slope

30 June 1971

15 July 1971

	Cover %	Comp. % all G & F	Comp. % by Group	% Freq.		Cover %	Comp. % all G & F	Comp. % by Group	% Freq.
Artr	20.5			85	Arno	5.83			45
Shrub Total	20.5				Cemo	2.76			10
Agsm	0.28	25.00	34.15	65	Shrub Total	8.59			
Pofe	0.13	11.61	15.85	15	Agsp	0.20	18.35	47.62	15
Pose	0.19	16.96	23.17	60	Orhy	0.18	16.51	42.86	25
Sihy	0.22	19.65	26.83	40	Pose	0.04	3.67	9.52	15
Grass Total	0.82	73.22	100.00		Grass Total	0.42	38.53	100.00	
Alac	0.02	1.79	6.67	15	Andi	0.03	2.75	4.40	5
Andi	0.01	0.89	3.33	5	Arfe	0.04	3.67	5.97	35
Arabis spp.	0.01	0.89	3.33	5	Cric	0.03	2.75	4.48	10
Crepis spp.	0.01	0.89	3.33	5	Eren	0.01	0.92	1.49	5
Eren	0.03	2.68	10.00	25	Haac	0.42	38.54	62.68	45
Oppo	0.10	8.93	33.35	5	Oppo	0.10	9.17	14.93	5
Phho	0.04	3.57	13.33	40	Pham	0.01	0.92	1.49	5
Phlo	0.03	2.68	10.00	25	Phho	0.03	2.75	4.48	30
Trgy	0.02	1.79	6.67	15	Forb Total	0.67	61.47	100.00	
Alde	0.01	0.89	3.33	10	Grass and				
Lare	0.01	0.89	3.33	15	Forb Total	1.09	100.00		
Unid.	0.01	0.89	3.33	5					
Forb Total	0.30	26.78	100.00						
Grass and									
Forb Total	1.12	100.00							



OPPENHIEMER ALLOTMENT - EAST PASTURE

Exclosure

Artr-Agsm Type - Sprayed
SE exp., 3° slope

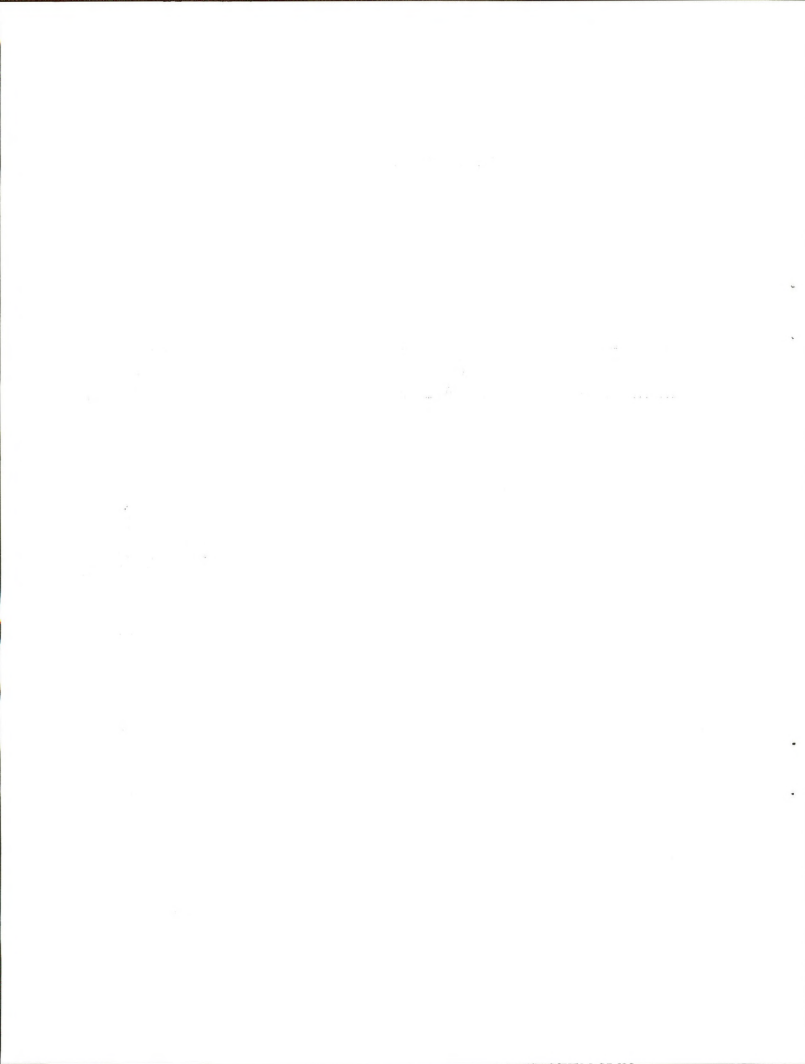
Outside

Inside

4 July 1971

5 July 1971

	Cover %	Comp. % all C & F	Comp. % by Group	% Freq.		Cover %	Comp. % all C & F	Comp. % by Group	% Freq.
Avg.	Avg.					Avg.			
Artr	6.26			30	Artr	4.43			40
Shrub Total	6.26				Koam	0.05			5
					Shrub Total	4.48			
Agsm	1.84	41.38	47.06	100	Agsm	2.28	48.33	53.15	95
Cael	1.59	35.75	40.66	70	Cael	1.46	30.93	34.03	95
Pose	0.34	7.64	8.70	90	Orhy	0.05	1.06	1.17	5
Sihy	0.09	2.02	2.30	30	Pose	0.49	10.38	11.42	85
Stco	0.05	1.12	1.28	5	Sihy	0.01	0.21	0.23	10
Grass Total	3.91	87.91	100.00		Grass Total	4.29	90.91	100.00	
Alac	0.01	0.22	1.85	5	Andi	0.03	0.64	6.98	10
Andi	0.01	0.22	1.85	5	Crepis spp.	0.01	0.21	2.33	5
Arabis spp.	0.01	0.22	1.85	5	Eren	0.02	0.42	4.65	20
Crepis spp.	0.01	0.22	1.85	10	Lofo	0.01	0.21	2.33	5
Cyac	0.01	0.22	1.85	5	Oppo	0.20	4.24	46.48	5
Oppo	0.35	7.87	64.83	10	Phho	0.07	1.48	16.28	45
Phho	0.03	0.67	5.56	25	Phlo	0.01	0.21	2.33	10
Trgy	0.02	0.45	3.70	20	Trgy	0.02	0.42	4.65	20
Alde	0.04	0.90	7.41	35	Alde	0.01	0.21	2.33	5
Chat	0.01	0.22	1.85	5	Cora	0.01	0.21	2.33	5
Cora	0.01	0.22	1.85	5	Cisi	0.01	0.21	2.33	5
Cisi	0.01	0.22	1.85	5	Lare	0.02	0.42	4.65	20
Lare	0.01	0.22	1.85	5	Unid.	0.01	0.21	2.33	10
Unid.	0.01	0.22	1.85	5					
Forb Total	0.54	12.09	100.00		Forb Total	0.43	9.09	100.00	
Grass and					Grass and				
Forb Total	4.45	100.00			Forb Total	4.72	100.00		



OPPENHIEMER ALLOTMENT - WEST PASTURE

C1-1

Artr-Agsm Type
SE exp., 1° slope

3 July 1971

C2-1

Artr-Agsm Type - Sprayed
N NE exp., 2° slope

3 July 1971

	Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.		Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.
Arsp	1.58			35	Artr	3.53			50
Artr	5.11			30	Atco	0.25			5
Atga	0.01			5					
Shrub Total	6.70				Shrub Total	3.78			
Agsm	0.09	8.65	20.93	30	Agsm	1.63	54.36	69.08	100
Orhy	0.17	16.35	39.53	35	Orhy	0.03	1.00	1.27	10
Pose	0.14	13.46	32.56	35	Pose	0.49	16.33	20.76	95
Sihy	0.03	2.88	6.98	25	Sihy	0.20	6.67	8.47	45
					Brte	0.01	0.33	0.42	5
Grass Total	0.43	41.34	100.00		Grass Total	2.36	78.69	100.00	
Andi	0.10	9.62	16.39	5	Andi	0.01	0.33	1.56	5
Eren	0.03	2.88	4.92	25	Arabis spp.	0.01	0.33	1.56	5
Lofo	0.01	0.96	1.64	5	Crepis spp.	0.03	1.00	4.69	25
Cppo	0.35	33.67	57.37	10	Eren	0.04	1.33	6.25	40
Phho	0.01	0.96	1.64	5	Lofo	0.01	0.33	1.56	5
Phlo	0.06	5.77	9.84	55	Oppo	0.33	11.00	51.56	20
Spco	0.01	0.96	1.64	10	Phho	0.03	1.00	4.69	30
Trgy	0.01	0.96	1.64	5	Phlo	0.04	1.33	6.25	40
Alde	0.01	0.96	1.64	5	Trgy	0.03	1.00	4.69	25
Gora	0.01	0.96	1.64	5	Alde	0.10	3.33	15.63	80
Lare	0.01	0.96	1.64	5	Lare	0.01	0.33	1.56	10
Forb Total	0.61	58.66	100.00		Forb Total	0.64	21.31	100.00	
Grass and Forb Total	1.04	100.00			Grass and Forb Total	3.00	100.00		



OPPENHIEMER ALLOTMENT - WEST PASTURE

C3-1

Artr-Agsm Type - Sprayed
N exp., 0,25° slope

3 July 1971

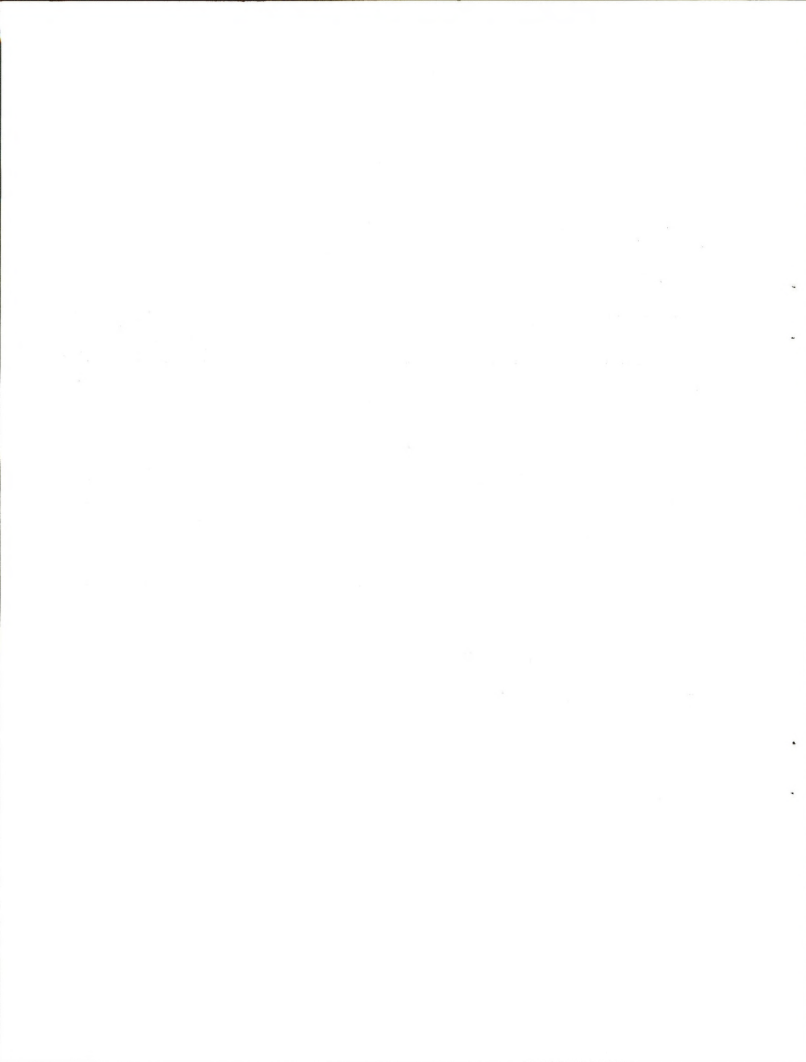
C4-1

Artr-Agsm Type
N exp., 2° slope

2 July 1971

	Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.
Artr	1.52			50
Shrub Total	1.52			
Agsm	2.38	70.61	81.79	100
Orhy	0.08	2.37	2.75	5
Pose	0.35	10.39	12.03	60
Sihy	0.01	0.30	0.34	5
Stco	0.08	2.37	2.75	10
Brte	0.01	0.30	0.34	10
Grass Total	2.91	86.34	100.00	
Eren	0.01	0.30	2.17	5
Lofo	0.01	0.30	2.17	5
Oppo	0.21	6.23	45.65	20
Phho	0.01	0.30	2.17	10
Phlo	0.04	1.19	8.70	40
Trgy	0.02	0.59	4.35	15
Alde	0.10	2.97	21.74	95
Cora	0.02	0.59	4.35	15
Lare	0.04	1.19	8.70	40
Forb Total	0.46	13.66	100.00	
Grass and Forb Total	3.37	100.00		

	Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.
Artr	6.13			70
Atco	0.06			10
Shrub Total	6.19			
Agsm	0.33	31.73	40.24	55
Pose	0.36	34.64	43.91	75
Sihy	0.02	1.92	2.44	15
Stco	0.11	10.58	13.41	10
Grass Total	0.82	78.87	100.00	
Crepis spp.	0.01	0.96	4.55	10
Eren	0.03	2.88	13.63	25
Erov	0.03	2.88	13.63	5
Lofo	0.01	0.96	4.55	5
Phho	0.04	3.85	18.17	40
Phlo	0.02	1.92	9.09	20
Toin	0.01	0.96	4.55	5
Trgy	0.01	0.96	4.55	10
Alde	0.03	2.88	13.63	30
Cora	0.01	0.96	4.55	10
Gipu	0.01	0.96	4.55	5
Lare	0.01	0.96	4.55	10
Forb Total	0.22	21.13	100.00	
Grass and Forb Total	1.04	100.00		



OPPENHIEMER ALLOTMENT - WEST PASTURE

C5-1

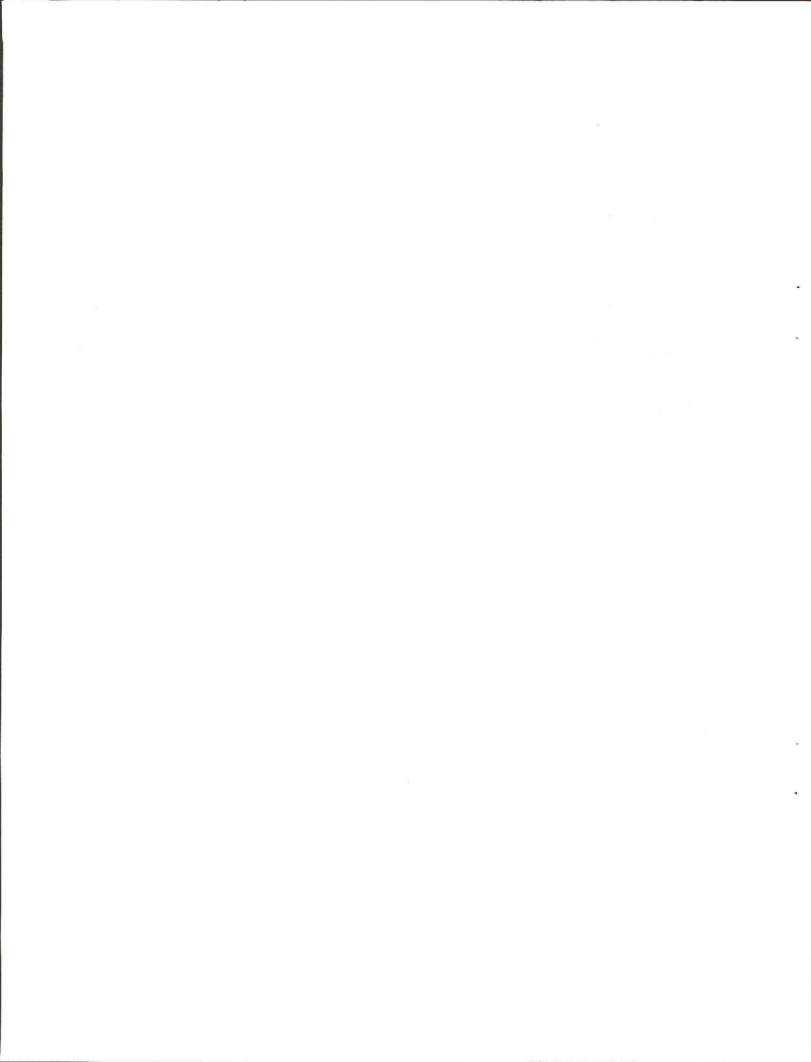
C6-1

Artr-Agsm Type
SE exp., 0.75° slopeArtr-Agsm Type
N NE exp., 1° slope

3 July 1971

30 June 1971

	Cover %	Comp. % all G & F	Comp. % by Group	% Freq.		Cover %	Comp. % all G & F	Comp. % by Group	% Freq.
Artr	5.01			40	Arsp	0.10			5
Shrub Total	5.01				Artr	6.05			50
Agsm	0.92	39.30	65.71	90	Atga	0.15			10
Orhy	0.01	0.43	0.71	5	Chvi	0.01			5
Pose	0.20	8.55	14.29	50	Shrub Total	6.31			
Sihy	0.04	1.71	2.86	15	Agsm	0.95	50.00	66.44	60
Stco	0.23	9.83	16.43	55	Orhy	0.11	5.78	7.69	20
Grass Total	1.40	59.82	100.00		Pose	0.25	13.16	17.48	55
Alac	0.01	0.43	1.06	10	Sihy	0.12	6.32	8.39	30
Andi	0.05	2.14	5.32	25	Grass Total	1.43	75.26	100.00	
Crepis spp.	0.01	0.43	1.06	5	Andi	0.02	1.05	4.26	15
Eren	0.01	0.43	1.06	5	Arabis spp.	0.01	0.53	2.13	5
Erov	0.06	2.56	6.38	15	Crepis spp.	0.01	0.53	2.13	10
Lofo	0.01	0.43	1.06	10	Eren	0.02	1.05	4.26	15
Oppo	0.58	24.78	61.73	25	Lofo	0.01	0.53	2.13	10
Phho	0.08	3.42	8.51	55	Oppo	0.25	13.16	53.17	10
Phlo	0.02	0.85	2.13	20	Phho	0.03	1.58	6.38	25
Trgy	0.01	0.43	1.06	10	Phlo	0.07	3.68	14.89	65
Alde	0.09	3.85	9.57	85	Trgy	0.02	1.05	4.26	20
Unid.	0.01	0.43	1.06	5	Cora	0.02	1.05	4.26	15
Forb Total	0.94	40.18	100.00		Lare	0.01	0.53	2.13	5
Grass and					Forb Total	0.47	24.74	100.00	
Forb Total	2.34	100.00			Grass and				
					Forb Total	1.90	100.00		



OPPENHIEMER ALLOTMENT - WEST PASTURE

C7-1

Artr-Agsm Tupe
S exp., 1° slope

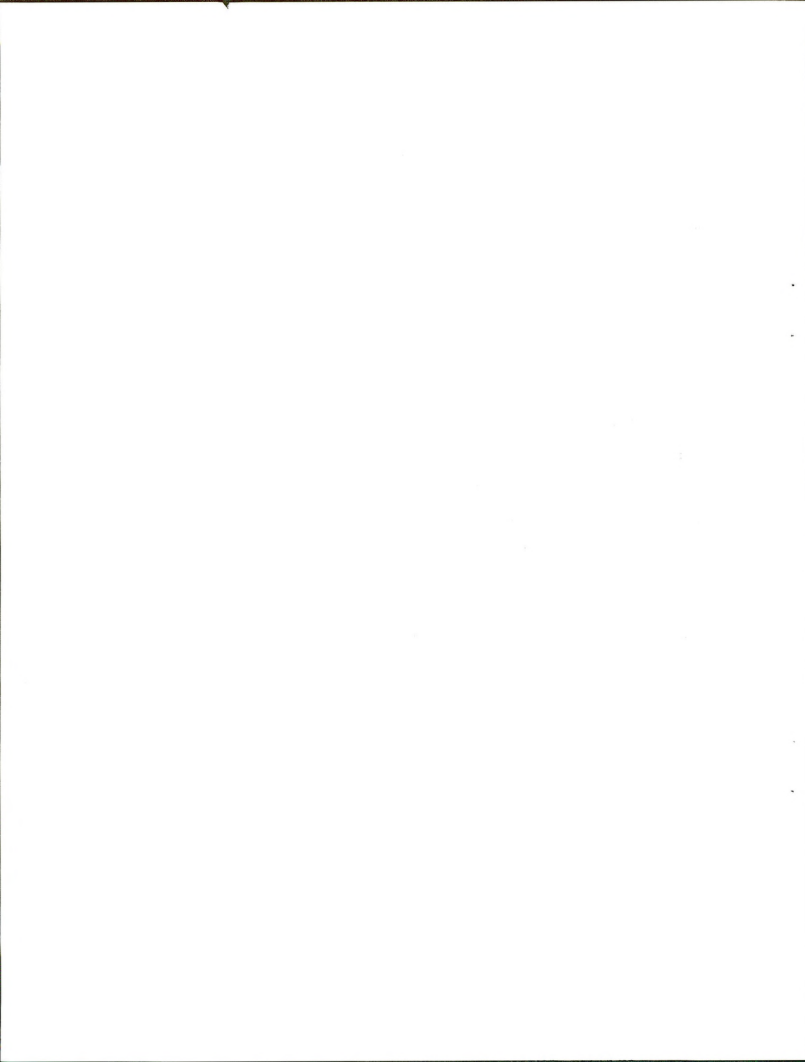
17 June 1971

C9-1

Juos Type
S exp., Variable slope (3-8°)

15 July 1971

	Cover %	Comp. % all	Comp. % by	%		Cover %	Comp. % all	Comp. % by	%
	Avg.	G & F	Group	Freq.		Avg.	G & F	Group	Freq.
Artr	8.17			85	Arno	7.91			50
					Artr	0.53			10
Shrub Total	8.17				Gemo	5.76			20
Agsm	0.22	27.18	36.67	50	Shrub Total	14.20			
Orhy	0.17	20.99	28.33	40					
Pose	0.06	7.41	10.00	20	Agsm	0.11	9.32	10.68	20
Sihy	0.07	8.64	11.67	25	Agsp	0.34	28.81	33.01	40
Stco	0.08	9.88	13.33	10	Kocr	0.01	0.85	0.97	5
					Pofe	0.18	15.25	17.48	15
Grass Total	0.60	74.10	100.00		Pose	0.39	33.07	37.86	30
Alte	0.04	4.94	19.05	35	Grass Total	1.03	87.30	100.00	
Cyac	0.01	1.23	4.76	10					
Eren	0.03	3.70	14.29	25	Arfe	0.02	1.69	13.33	15
Phho	0.01	1.23	4.76	10	Assp	0.01	0.85	6.67	5
Phlo	0.03	3.70	14.29	25	Eren	0.01	0.85	6.67	10
Spce	0.01	1.23	4.76	10	Haac	0.06	5.08	40.00	10
Trgy	0.02	2.47	9.52	15	Phho	0.02	1.69	13.33	20
Alde	0.05	6.17	23.81	45	Trgy	0.03	2.54	20.00	25
Lare	0.01	1.23	4.76	5					
Forb Total	0.21	25.90	100.00		Forb Total	0.15	12.70	100.00	
Grass and					Grass and				
Forb Total	0.81	100.00			Forb Total	1.18	100.00		



OPPENHIEMER ALLOTMENT - WEST PASTURE

Exclosure

Artr-Agsm Type - No Spray
E exp., 3° slope

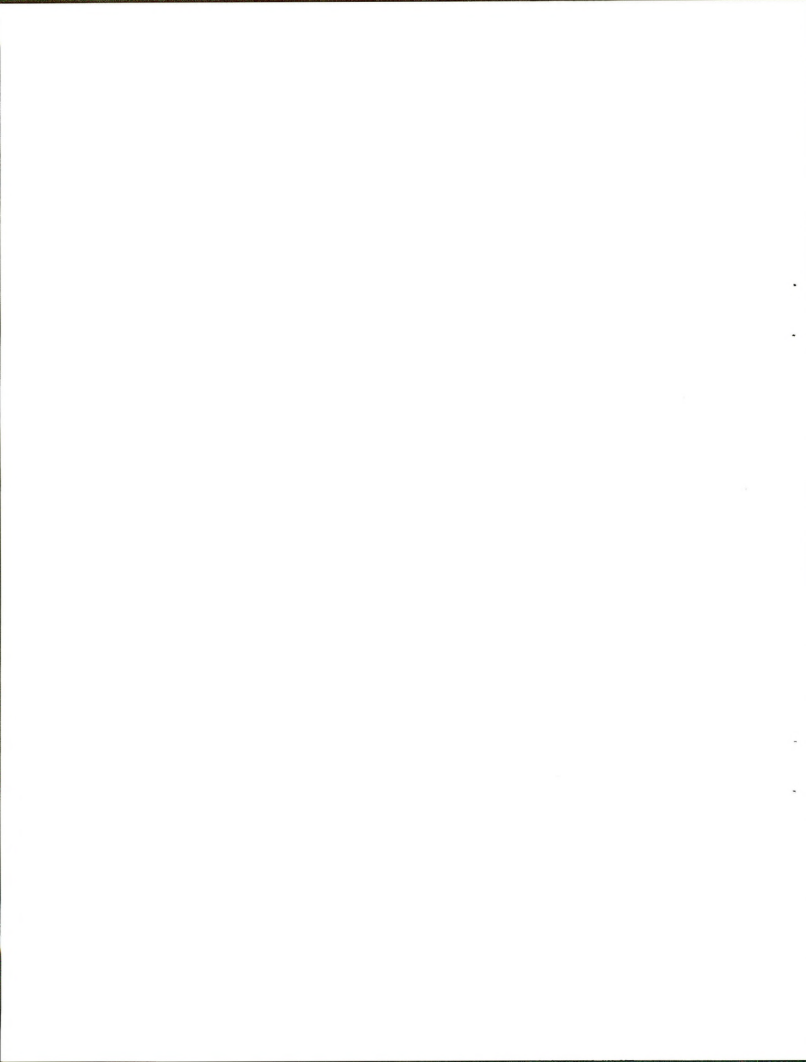
Inside

Outside

4 July 1971

5 July 1971

	Cover %	Comp. % all	Comp. % by	% Freq.		Cover %	Comp. % all	Comp. % by	% Freq.
	Avg.	G & F	Group			Avg.	G & F	Group	
Artr	2.29			45	Artr	6.25			50
Shrub Total	2.29				Atco	3.25			10
					Shrub Total	9.50			
Agsm	0.90	32.24	44.55	90	Agsm	1.76	54.31	60.90	100
Cael	0.06	2.15	2.97	20	Cael	0.57	17.59	19.72	75
Kocr	0.03	1.08	1.49	5	Pose	0.51	15.74	17.65	85
Orhy	0.11	3.94	5.45	25	Sihy	0.05	1.54	1.73	10
Pose	0.44	15.77	21.78	85					
Stco	0.48	17.20	23.76	70	Grass Total	2.89	89.18	100.00	
Grass Total	2.02	72.38	100.00		Andi	0.10	3.09	28.57	35
Andi	0.02	0.72	2.60	15	Arabis spp.	0.01	0.31	2.86	5
Anbr	0.01	0.36	1.30	5	Crepis spp.	0.02	0.62	5.71	20
Aspu	0.01	0.36	1.30	5	Cyac	0.01	0.31	2.86	5
Cyac	0.01	0.36	1.30	10	Eren	0.04	1.23	11.43	35
Eren	0.03	1.08	3.90	30	Erov	0.01	0.31	2.86	5
Erov	0.03	1.08	3.90	10	Oppo	0.03	0.93	8.57	5
Haac	0.10	3.58	12.99	5	Phho	0.04	1.23	11.43	40
Oppo	0.36	12.90	46.73	15	Spco	0.01	0.31	2.86	10
Phho	0.12	4.30	15.58	80	Trgy	0.03	0.93	8.57	25
Phlo	0.02	0.72	2.60	20	Alde	0.02	0.62	5.71	15
Trgy	0.03	1.08	3.90	25	Lare	0.02	0.62	5.71	15
Cora	0.01	0.36	1.30	5	Unid.	0.01	0.31	2.86	10
Lare	0.02	0.72	2.60	15	Forb Total	0.35	10.82	100.00	
Forb Total	0.77	27.62	100.00		Grass and				
Grass and					Forb Total	3.24	100.00		
Forb Total	2.79	100.00							



POWDER RIM ALLOTMENT - PASTURE A

C1-1

Artr-Agsm Type - Sprayed
NE exp., 2° slope

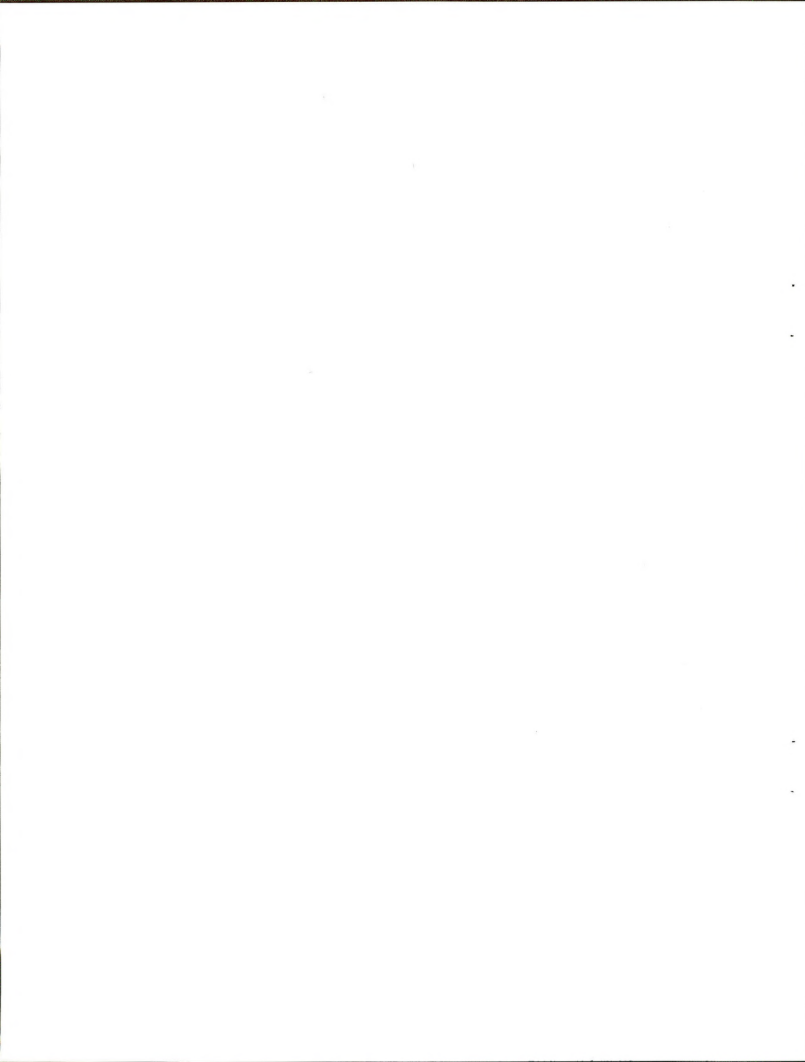
6 July 1971

C2-1

Artr-Agsp Type - Sprayed
NE exp., 1° slope

6 July 1971

	Cover %	Comp. % all G & F	Comp. % by Group	% Freq.		Cover %	Comp. % all G & F	Comp. % by Group	% Freq.
	Avg.					Avg.			
Artr	0.85			10	Atco	0.01			5
Shrub Total	0.85				Shrub Total	0.01			
Agsm	2.13	40.19	41.60	50	Agsp	1.32	45.54	48.18	75
Agsp	1.78	33.58	34.77	55	Orhy	0.16	5.52	5.84	15
Kocr	0.06	1.13	1.17	10	Pofe	0.06	2.07	2.19	10
Orhy	0.22	4.15	4.30	35	Pose	0.42	14.48	15.33	65
Pofe	0.26	4.91	5.08	30	Sihy	0.09	3.10	3.28	30
Pose	0.26	4.91	5.08	60	Stco	0.69	23.79	25.18	70
Sihy	0.14	2.64	2.73	35					
Stco	0.27	5.09	5.27	50	Grass Total	2.74	94.50	100.00	
Grass Total	5.12	96.60	100.00		Alte	0.02	0.69	12.50	20
Alte	0.01	0.19	5.56	10	Arabis spp.	0.01	0.34	6.25	5
Eren	0.02	0.38	11.11	15	Ermi	0.02	0.69	12.50	15
Ermi	0.01	0.19	5.56	10	Erov	0.01	0.34	6.25	5
Fhho	0.01	0.19	5.56	5	Phho	0.02	0.69	12.50	20
Phlo	0.07	1.32	38.88	65	Phlo	0.06	2.07	37.50	35
Chat	0.02	0.38	11.11	20	Sili	0.01	0.34	6.25	5
Lare	0.04	0.75	22.22	35	Lare	0.01	0.34	6.25	5
Forb Total	0.18	3.40	100.00		Forb Total	0.16	5.50	100.00	
Grass and					Grass and				
Forb Total	5.30	100.00			Forb Total	2.90	100.00		



POWDER RIM ALLOTMENT - PASTURE A

C3-1

C4-1

Artr-Agsm Type
NE exp., 0.5° slope

Artr-Agsm Type
W exp., 1° slope

6 July 1971

6 July 1971

	Cover %	Comp. % all	Comp. % by	%		Cover %	Comp. % all	Comp. % by	%
	Avg.	G & F	Group	Freq.		Avg.	G & F	Group	Freq.
Artr	10.83			55	Artr	7.96			35
Atco	0.03			5	Chvi	0.60			25
					Koam	0.03			25
Shrub Total	10.86				Shrub Total	8.59			
Agsm	0.73	56.13	76.04	75	Agsm	0.51	50.01	80.95	50
Pose	0.19	14.62	19.79	55	Pose	0.08	7.84	12.70	10
Sihi	0.04	3.08	4.17	20	Sihi	0.04	3.92	6.35	20
Grass Total	0.96	73.83	100.00		Grass Total	0.63	61.77	100.00	
Alte	0.01	0.77	2.94	5	Arabis spp.	0.15	14.71	38.47	5
Andi	0.04	3.08	11.76	15	Aspu	0.01	0.98	2.56	5
Arabis spp.	0.01	0.77	2.94	5	Cyac	0.01	0.98	2.56	10
Eren	0.02	1.54	5.88	20	Eren	0.02	1.96	5.13	15
Erov	0.06	4.62	17.65	15	Erov	0.06	5.88	15.38	20
Oppo	0.05	3.85	14.71	5	Haac	0.05	4.90	12.82	10
Pefr	0.01	0.77	2.94	10	Phho	0.09	8.82	23.08	65
Phho	0.10	7.69	29.42	80	Forb Total	0.39	38.23	100.00	
Trey	0.01	0.77	2.94	5	Grass and				
Chat	0.01	0.77	2.94	5	Forb Total	1.02	100.00		
Cora	0.02	1.54	5.88	20					
Forb Total	0.34	26.17	100.00						
Grass and									
Forb Total	1.30	100.00							

POWDER RIM ALLOTMENT - PASTURE A

C4-2

Artr-Agsm Type
E exp., 2° slope

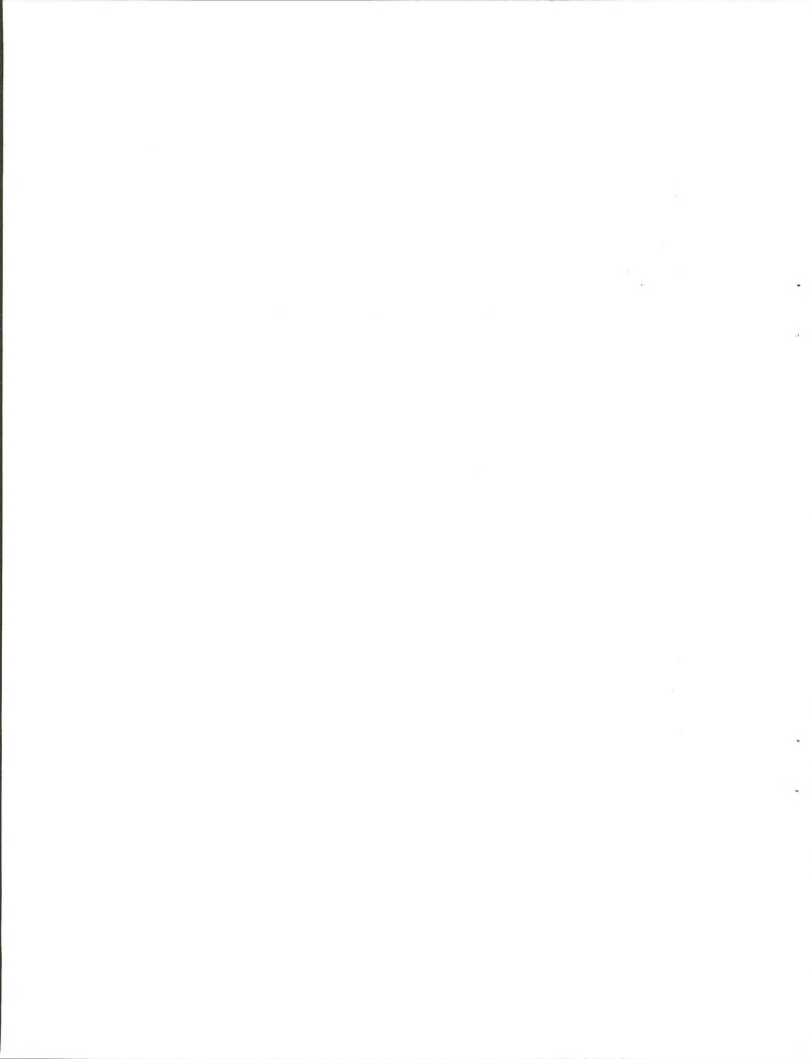
6 July 1971

C5-1

Artr-Agsm Type
N NW exp., 2° slope

23 June 1971

	Cover %	Comp. % all G & F	Comp. % by Group	% Freq.		Cover %	Comp. % all G & F	Comp. % by Group	% Freq.
Artr	11.14			60	Artr	13.75			65
Shrub Total	11.14				Shrub Total	13.75			
Agsm	0.99	55.95	62.27	90	Agsm	1.04	59.81	73.25	80
Orhy	0.18	10.17	11.32	25	Orhy	0.20	11.49	14.08	15
Pose	0.06	3.39	3.77	15	Pose	0.14	8.05	9.86	50
Stco	0.36	20.34	22.64	35	Stco	0.01	0.57	0.70	5
Grass Total	1.59	89.85	100.00		Grass Total	1.42	81.64	100.00	
Aspu	0.01	0.56	5.56	5	Alte	0.02	1.15	6.25	15
Ermi	0.04	2.26	22.22	20	Andi	0.01	0.57	3.13	5
Erov	0.01	0.56	5.56	5	Arabis spp.	0.01	0.57	3.13	5
Phho	0.06	3.39	33.32	55	Aspu	0.01	0.57	3.13	5
Phlo	0.04	2.26	22.22	20	Eren	0.02	1.15	6.25	15
Sili	0.01	0.56	5.56	5	Erov	0.01	0.57	3.13	5
Cora	0.01	0.56	5.56	10	Haac	0.10	5.75	31.21	5
Forb Total	0.18	10.15	100.00		Phho	0.05	2.87	15.63	45
Grass and					Phlo	0.06	3.45	18.75	55
Forb Total	1.77	100.00			Sili	0.01	0.57	3.13	10
					Cora	0.01	0.57	3.13	10
					Monu	0.01	0.57	3.13	5
					Forb Total	0.32	18.36	100.00	
					Grass and				
					Forb Total	1.74	100.00		



POWDER RIM ALLOTMENT - PASTURE A

C6-1

Artr-Agsm Type
NE exp., 2° slope

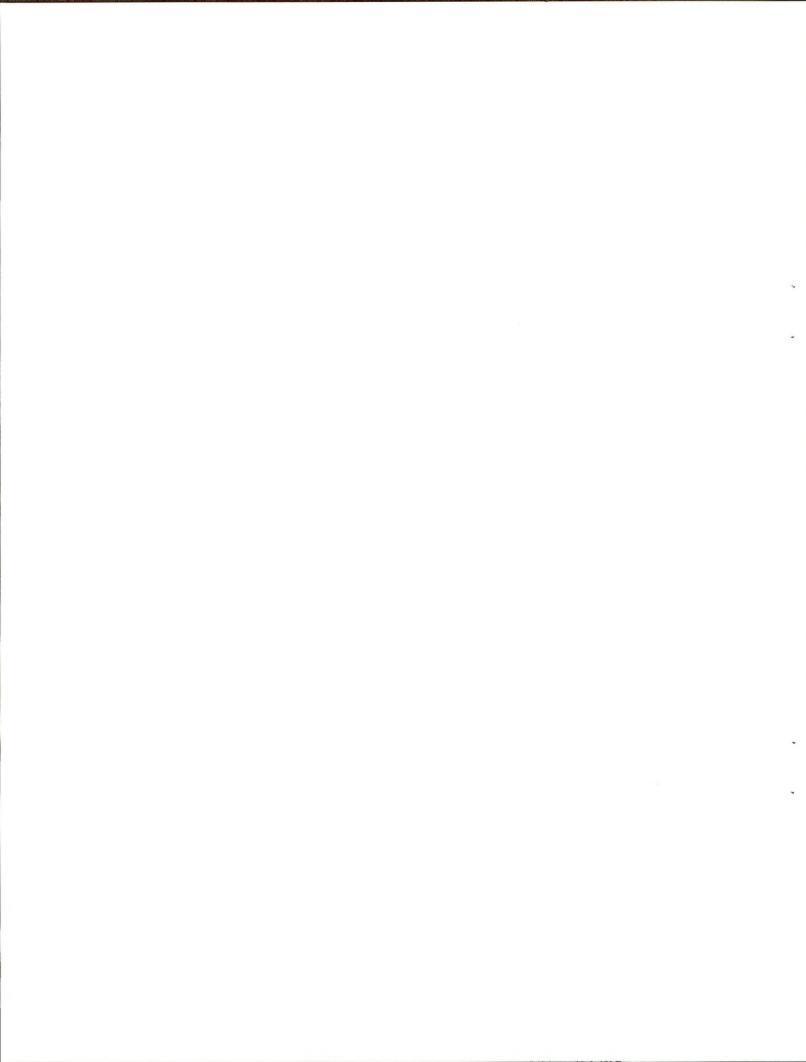
23 June 1971

C7-1

Artr-Agsp Type
NE E exp., 3.5° slope

5 July 1971

	Cover %	Comp. % all G & F	Comp. % by Group	% Freq.		Cover %	Comp. % all G & F	Comp. % by Group	% Freq.
Artr	16.52			75	Artr	5.96			25
Shrub Total	16.52				Shrub Total	5.96			
Agsm	0.40	38.47	43.00	55	Agsp	1.89	69.73	89.57	75
Cael	0.01	0.96	1.08	5	Kocr	0.10	3.69	4.74	30
Orhy	0.11	10.58	11.83	10	Orhy	0.04	1.48	1.90	15
Pose	0.06	5.77	6.45	40	Pose	0.07	2.58	3.32	30
Sihy	0.03	2.88	3.23	5	Sihy	0.01	0.37	0.47	5
Stco	0.31	29.81	33.33	20					
Brte	0.01	0.96	1.08	5	Grass Total	2.11	77.85	100.00	
Grass Total	0.93	89.43	100.00		Arabis spp.	0.01	0.37	1.67	5
Alte	0.01	0.96	9.09	10	Aspu	0.01	0.37	1.67	10
Asdi	0.02	1.92	18.18	15	Ermi	0.02	0.74	3.33	15
Eren	0.01	0.96	9.09	5	Erpu	0.03	1.11	5.00	30
Erov	0.01	0.96	9.09	5	Haac	0.50	18.45	83.33	50
Phho	0.01	0.96	9.09	10	Phho	0.03	1.11	5.00	30
Phlo	0.04	3.85	36.37	35	Forb Total	0.60	22.15	100.00	
Cora	0.01	0.96	9.09	5	Grass and Forb Total	2.71	100.00		
Forb Total	0.11	10.57	100.00						
Grass and Forb Total	1.04	100.00							



POWDER RIM ALLOTMENT - PASTURE A

C8-1

Juos Type
E exp., 12° slope

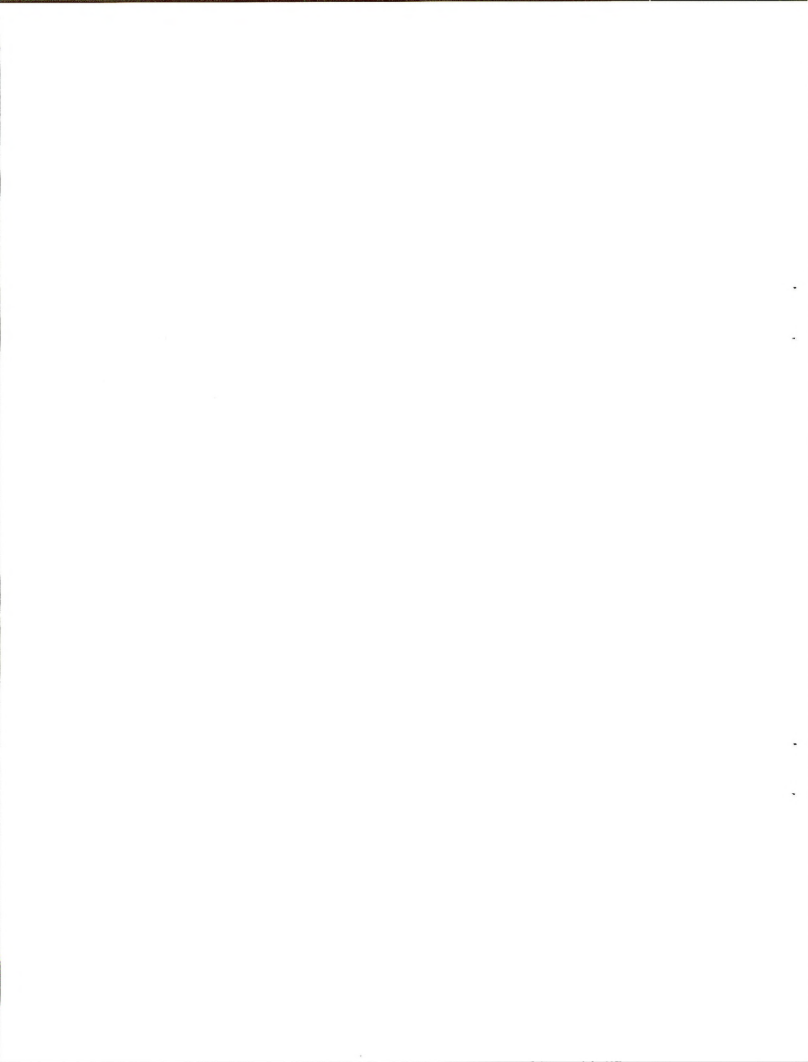
15 July 1971

C8-2

Juos Type
W exp., 8° slope

15 July 1971

	Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.		Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.
Artr	2.25			10	Arno	0.50			5
Juos	18.55			30	Juos	30.75			40
Putr	0.01			5					
Shrub Total	20.81				Shrub Total	31.25			
Agsp	0.13	18.30	23.64	15	Agsm	0.01	0.93	1.43	5
Kocr	0.03	4.23	5.45	10	Agsp	0.41	37.93	58.57	45
Orhy	0.09	12.68	16.36	20	Orhy	0.07	6.48	10.00	25
Pofe	0.19	26.75	34.55	35	Pofe	0.18	16.67	25.71	15
Pose	0.01	1.41	1.82	10	Pose	0.03	2.78	4.29	10
Stco	0.10	14.08	18.18	10	Grass Total	0.70	64.79	100.00	
Grass Total	0.55	77.45	100.00		Arfe	0.01	0.93	2.63	10
Asdi	0.01	1.41	6.25	10	Asdi	0.03	2.78	7.89	25
Crfc	0.05	7.04	31.25	30	Basa	0.01	0.93	2.63	5
Erea	0.01	1.41	6.25	5	Crfc	0.07	6.48	18.42	25
Erum	0.03	4.23	18.75	10	Ermi	0.01	0.93	2.63	5
Luar	0.01	1.41	6.25	10	Haac	0.13	12.04	34.22	15
Pefr	0.01	1.41	6.25	10	Haar	0.10	9.26	26.32	5
Phho	0.01	1.41	6.25	5	Luar	0.01	0.93	2.63	5
Cora	0.01	1.41	6.25	5	Phlo	0.01	0.93	2.63	5
Gisi	0.01	1.41	6.25	5	Forb Total	0.38	35.21	100.00	
Oeco	0.01	1.41	6.25	5	Grass and Forb Total	1.08	100.00		
Forb Total	0.16	22.55	100.00						
Grass and Forb Total	0.71	100.00							



POWDER RIM ALLOTMENT - PASTURE A

Exclosure

Artr-Agsm-Agsp Type - Sprayed
E NE exp., 4⁸ slope

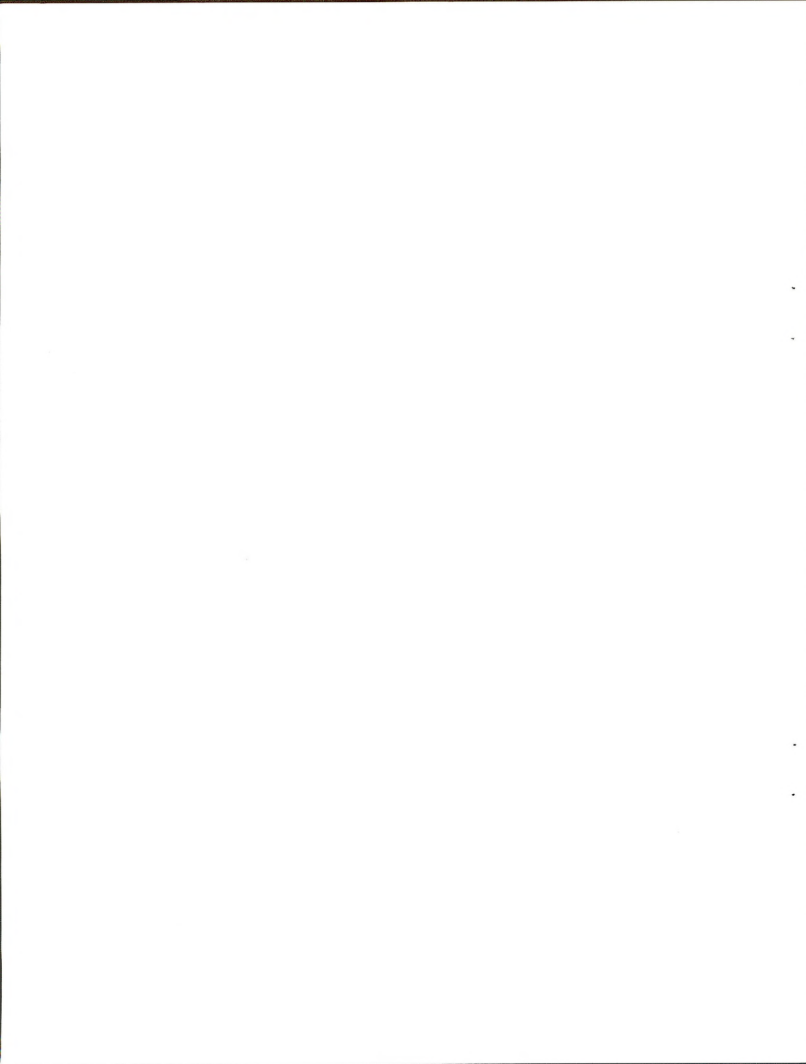
Inside Tr. 1

Inside Tr. 2

7 July 1971

7 July 1971

	Cover %	Comp. % all G & F	Comp. % by Group	% Freq.		Cover %	Comp. % all G & F	Comp. % by Group	% Freq.
	Avg.					Avg.			
Artr	0.38			20	Artr	1.85			25
Shrub Total	0.38				Shrub Total	1.85			
Agsm	1.65	35.78	39.10	95	Agsm	0.83	25.03	31.93	50
Agsp	0.51	11.06	12.09	35	Agsp	0.50	15.06	19.23	45
Cael	0.14	3.04	3.32	25	Cafi	0.18	5.42	6.92	10
Kocr	0.11	2.39	2.61	15	Kocr	0.20	6.02	7.69	20
Orhy	0.03	0.65	0.71	5	Orhy	0.03	0.90	1.15	10
Pofe	1.25	27.11	29.61	45	Pofe	0.56	16.87	21.54	45
Pose	0.06	1.30	1.42	40	Pose	0.11	3.31	4.23	45
Sihy	0.18	3.90	4.27	25	Stco	0.19	5.72	7.31	30
Stco	0.29	6.29	6.87	35					
Grass Total	4.22	91.52	100.00		Grass Total	2.60	78.33	100.00	
Alte	0.02	0.43	5.13	15	Alte	0.02	0.60	2.78	20
Crfc	0.01	0.22	2.56	5	Asdi	0.01	0.30	1.39	10
Eren	0.01	0.22	2.56	5	Crfc	0.01	0.30	1.39	5
Ermi	0.24	5.21	61.56	65	Eren	0.01	0.30	1.39	10
Phho	0.01	0.22	2.56	5	Ermi	0.19	5.72	26.39	55
Phlo	0.07	1.52	17.95	65	Erov	0.03	0.90	4.17	5
Sein	0.01	0.22	2.56	5	Haac	0.34	10.24	47.21	35
Chat	0.01	0.22	2.56	5	Phho	0.01	0.30	1.39	10
Cora	0.01	0.22	2.56	5	Phlo	0.07	2.11	9.72	70
Forb Total	0.39	8.48	100.00		Sein	0.01	0.30	1.39	5
Grass and					Sili	0.01	0.30	1.39	5
Forb Total	4.61	100.00			Cora	0.01	0.30	1.39	10
					Forb Total	0.72	21.67	100.00	
					Grass and				
					Forb Total	3.32	100.00		



POWDER RIM ALLOTMENT - PASTURE A

Exclosure

Artr-Agsm-Agsp Type - Sprayed
E NE exp., 4th slope

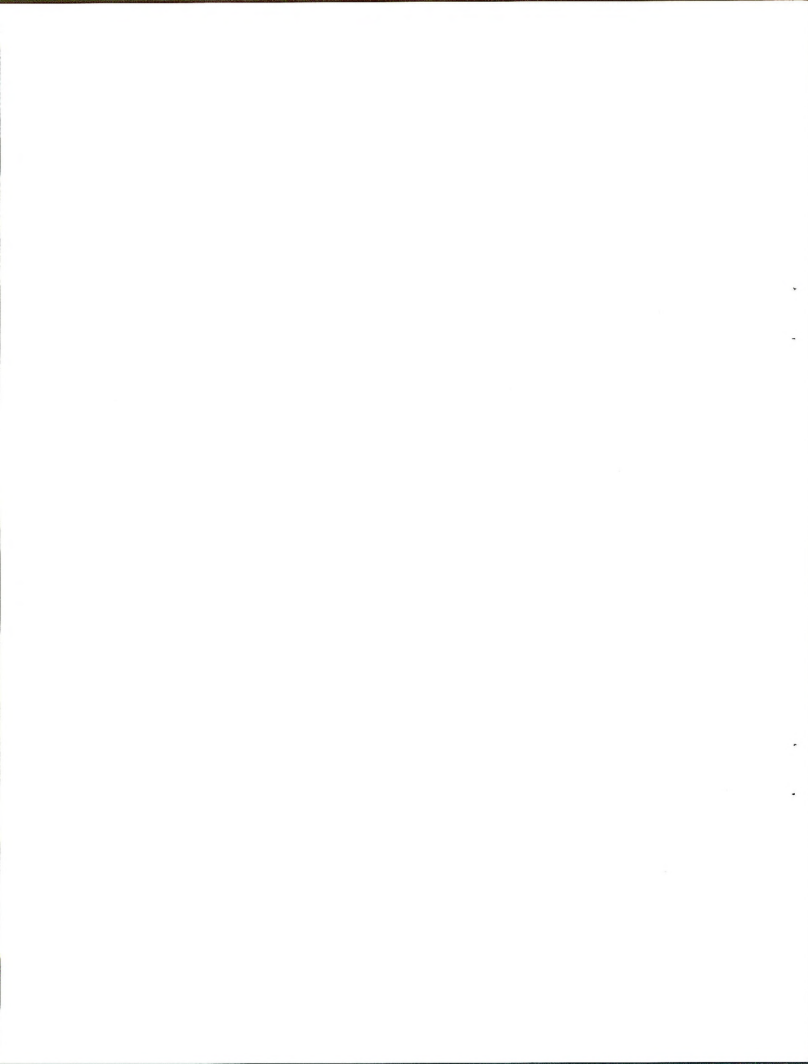
Outside Tr. 1

Outside Tr. 2

7 July 1971

7 July 1971

	Cover %	Comp. % all G & F	Comp. % by Group	% Freq.		Cover %	Comp. % all G & F	Comp. % by Group	% Freq.
	Avg.					Avg.			
Artr	0.10			5	Artr	1.40			15
Shrub Total	0.10				Shrub Total	1.40			
Agsm	2.36	49.59	50.97	95	Agsm	1.81	49.04	55.68	90
Agsp	0.59	12.39	12.74	35	Agsp	0.18	4.88	5.54	15
Caf1	0.85	17.86	18.36	15	Cael	0.18	4.88	5.54	20
Kocr	0.03	0.63	0.65	5	Kocr	0.13	3.52	4.00	25
Orhy	0.13	2.73	2.81	15	Orhy	0.05	1.36	1.54	5
Pofe	0.05	1.05	1.08	5	Pofe	0.35	9.49	10.77	50
Pose	0.10	2.10	2.16	30	Pose	0.10	2.71	3.08	40
Stco	0.52	10.92	11.23	40	Sihy	0.15	4.07	4.62	20
					Stco	0.30	8.13	9.23	45
Grass Total	4.63	97.27	100.00		Grass Total	3.25	88.08	100.00	
Arfe	0.01	0.21	7.69	5	Alte	0.01	0.27	2.27	10
Asdi	0.01	0.21	7.69	5	Andi	0.05	1.36	11.36	5
Aspu	0.01	0.21	7.69	5	Arabis spp.	0.01	0.27	2.27	5
Cyac	0.01	0.21	7.69	5	Aspu	0.01	0.27	2.27	5
Ermi	0.02	0.42	15.38	20	Crfc	0.01	0.27	2.27	10
Phho	0.01	0.21	7.69	10	Erea	0.01	0.27	2.27	10
Phlo	0.05	1.05	38.48	45	Ermi	0.15	4.07	34.09	65
Lare	0.01	0.21	7.69	5	Haac	0.03	0.81	6.82	10
Forb Total	0.13	2.73	100.00		Phlo	0.13	3.52	29.56	85
Grass and					Sein	0.02	0.54	4.55	15
Forb Total	4.76	100.00			Chat	0.01	0.27	2.27	5
					Forb Total	0.44	11.92	100.00	
					Grass and				
					Forb Total	3.69	100.00		



POWDER RIM ALLOTMENT - PASTURE B

C1-1

C2-1

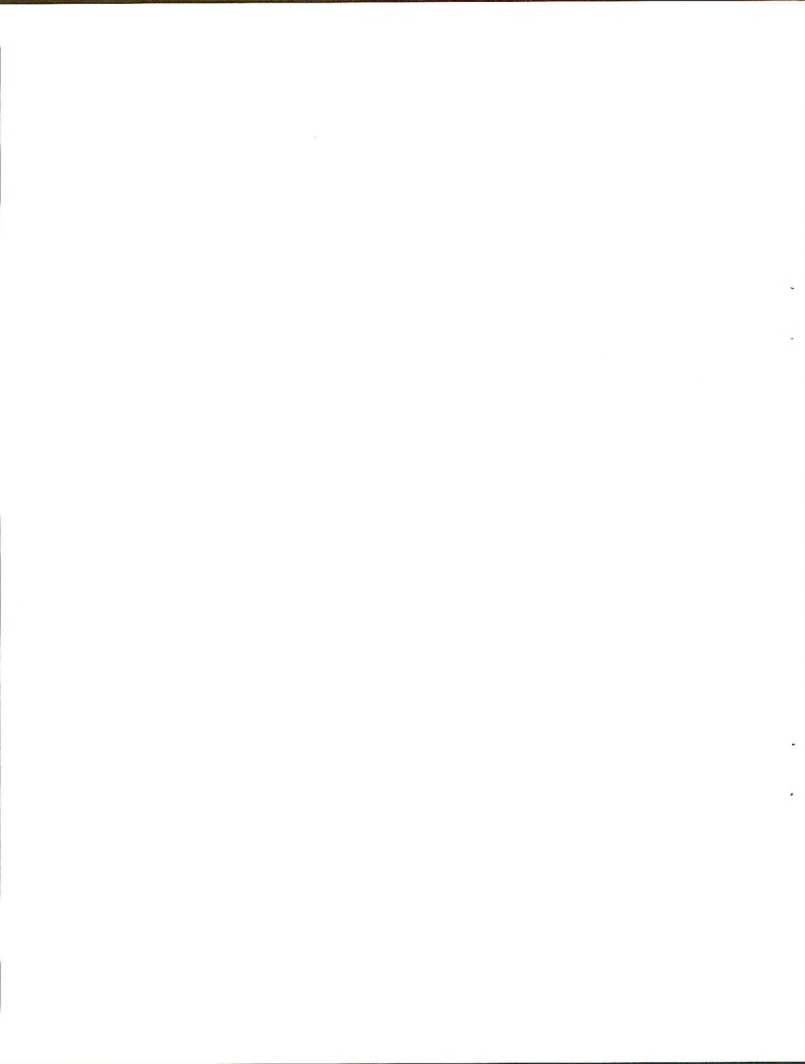
Atga Type
0 slope

Artr-Agsm Type
S exp., 1.5° slope

24 June 1971

24 June 1971

	Cover %	Comp. % all G & F	Comp. % by Group	% Freq.		Cover %	Comp. % all G & F	Comp. % by Group	% Freq.
Atga	18.06			100	Artr	10.56			70
Shrub Total	18.06				Eula	0.01			5
					Shrub Total	10.57			
Orhy	0.05	38.46	83.33	5	Agsm	1.29	57.57	66.84	80
Pose	0.01	7.69	16.67	5	Orhy	0.01	0.45	0.52	10
Grass Total	0.06	46.15	100.00		Pose	0.10	4.46	5.18	35
Monu	0.01	7.69	14.29	10	Stco	0.53	23.66	27.46	35
Lare	0.06	46.16	85.71	60	Grass Total	1.93	86.14	100.00	
Forb Total	0.07	53.85	100.00		Alte	0.05	2.23	16.13	45
Grass and					Aspu	0.01	0.45	3.23	5
Forb Total	0.13	100.00			Andi	0.01	0.45	3.23	5
					Erov	0.09	4.02	29.01	20
					Pefr	0.01	0.45	3.23	5
					Phho	0.06	2.68	19.35	35
					Phlo	0.03	1.34	9.68	25
					Spco	0.01	0.45	3.23	10
					Trgy	0.01	0.45	3.23	10
					Chde	0.01	0.45	3.23	10
					Erce	0.02	0.89	6.45	20
					Forb Total	0.31	13.86	100.00	
					Grass and				
					Forb Total	2.24	100.00		



POWDER RIM ALLOTMENT - PASTURE B

C3-1

Chgr-Orhy Type
NE exp., 1.75° slope

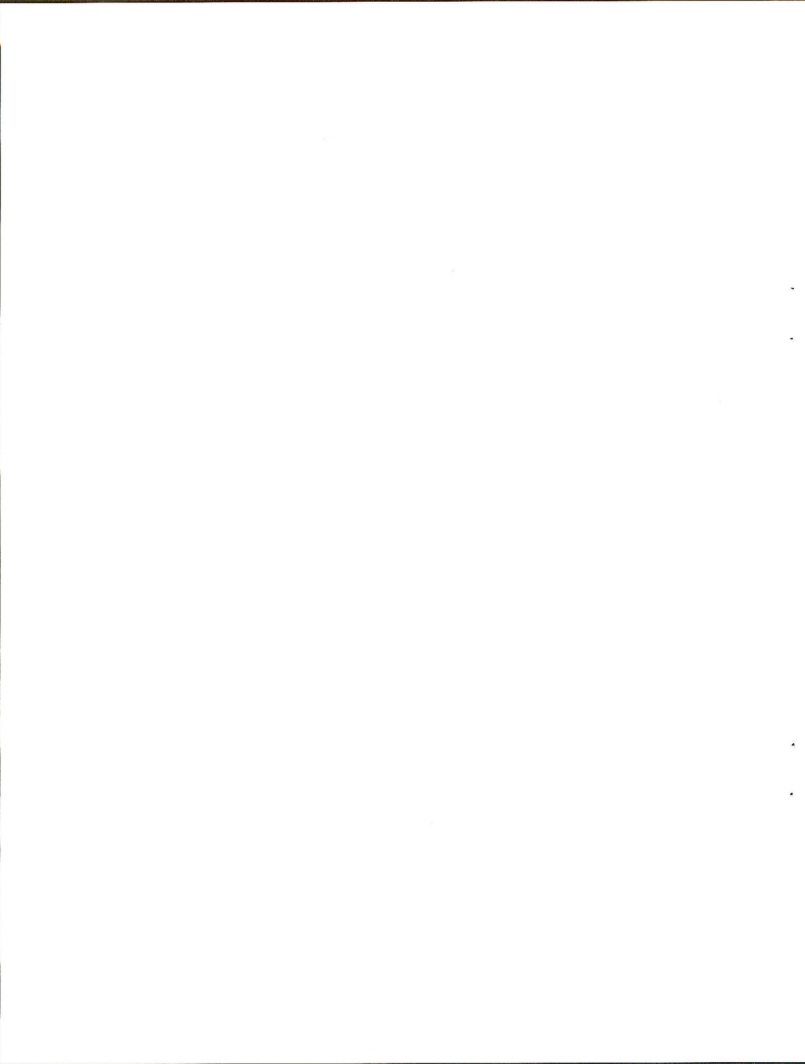
24 June 1971

C4-1

Artr-Cafi Type
S SW exp., 4° slope

24 June 1971

	Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.		Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.
Atga	0.51			15	Artr	4.65			15
Chvi	1.92			90					
Koam	0.09			20	Shrub Total	4.65			
Magl	1.19			50					
Shrub Total	3.71				Agsm	0.21	4.31	4.41	40
					Cael	0.13	2.67	2.73	40
Orhy	0.29	46.78	50.88	30	Cafi	3.25	66.70	68.28	60
Pose	0.21	33.87	36.84	25	Hija	0.16	3.29	3.36	15
Sihiy	0.07	11.29	12.28	20	Orhy	0.03	0.62	0.63	10
					Pose	0.03	0.62	0.63	10
Grass Total	0.57	91.94	100.00		Stco	0.93	19.10	19.54	80
					Feoc	0.02	0.41	0.42	20
Alte	0.02	3.23	40.00	20	Grass Total	4.76	97.72	100.00	
Lofo	0.01	1.61	20.00	5					
Phho	0.01	1.61	20.00	5	Alte	0.01	0.21	9.09	5
Trgy	0.01	1.61	20.00	5	Phho	0.01	0.21	9.09	5
Forb Total	0.05	8.06	100.00		Spec	0.04	0.82	36.37	15
					Gipu	0.02	0.41	18.18	15
Grass and					Oeco	0.01	0.21	9.09	10
Forb Total	0.62	100.00			Flpa	0.01	0.21	9.09	10
					Unid.	0.01	0.21	9.09	10
					Forb Total	0.11	2.28	100.00	
					Grass and				
					Forb Total	4.87	100.00		



POWDER RIM ALLOTMENT - PASTURE B

C5-1

Artr-Agsp Type
N exp., 3° slope

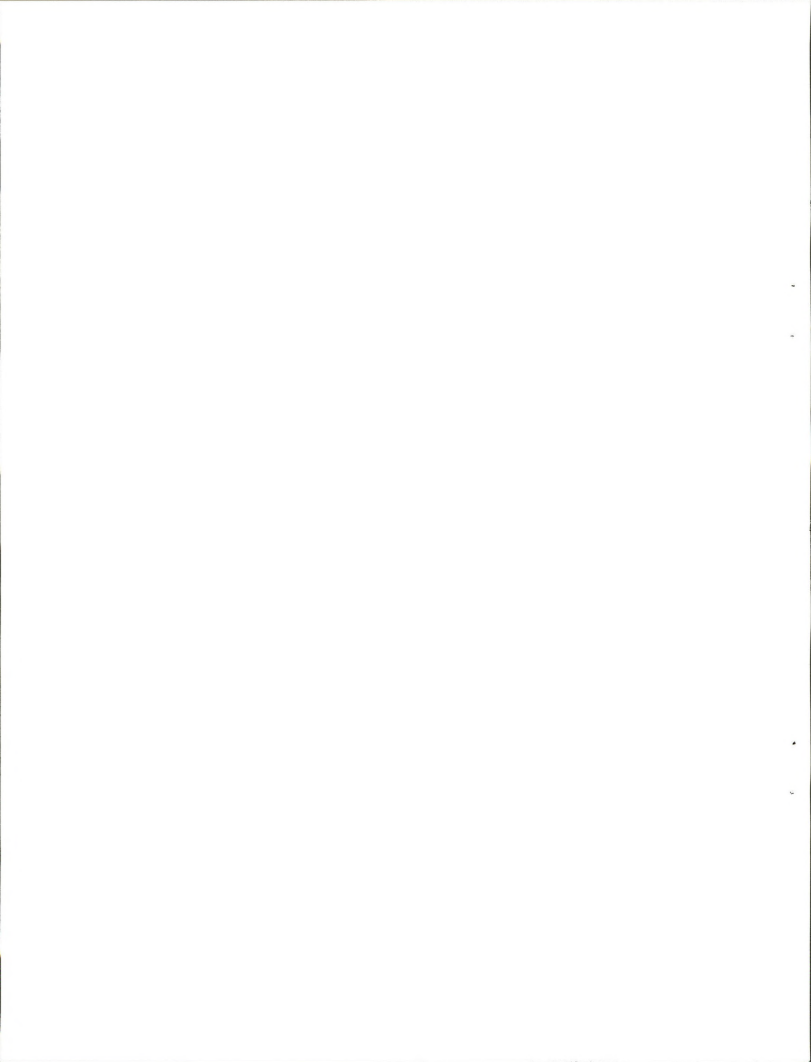
7 July 1971

C6-1

Artr-Agsm Type
N NW exp., 0.5° slope

24 June 1971

	Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.		Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.
Artr	1.03			10	Artr	12.40			65
Atco	0.18			15	Chvi	0.01			5
Chvi	0.15			10					
Eula	0.60			10	Shrub Total	12.41			
Shrub Total	1.96				Agsm	0.81	59.12	65.84	100
Agsm	1.61	36.76	38.52	30	Cael	0.05	3.65	4.07	5
Agsp	2.21	50.46	52.86	65	Orhy	0.25	18.25	20.33	15
Kocr	0.11	2.51	2.63	20	Pose	0.12	8.76	9.76	30
Orhy	0.06	1.37	1.44	20	Grass Total	1.23	89.78	100.00	
Pose	0.19	4.34	4.55	70	Alte	0.02	1.46	14.29	15
Grass Total	4.18	95.44	100.00		Cyac	0.02	1.46	14.29	15
Assp	0.09	2.05	45.00	40	Erov	0.01	0.73	7.14	10
Ermi	0.02	0.46	10.00	15	Phho	0.04	2.92	28.57	40
Erpu	0.04	0.91	20.00	40	Spco	0.02	1.46	14.29	15
Phho	0.04	0.91	20.00	40	Depi	0.01	0.73	7.14	10
Lare	0.01	0.23	5.00	5	Lare	0.01	0.73	7.14	5
					Unid.	0.01	0.73	7.14	5
Forb Total	0.20	4.56	100.00		Forb Total	0.14	10.22	100.00	
Grass and					Grass and				
Forb Total	4.38	100.00			Forb Total	1.37	100.00		



POWDER RIM ALLOTMENT - PASTURE B

C7-1

Arpe Type
W exp., 0.5° slope

24 June 1971

C8-1

Artr-Agsm Type
S exp., 3° slope

5 July 1971

	Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.		Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.
Arpe	4.63			95	Artr	7.35			50
Atga	0.15			10					
Chvi	2.71			80	Shrub Total	7.35			
Shrub Total	7.49				Agsm	3.33	90.01	95.41	95
Agsm	0.13	15.12	18.57	15	Orhy	0.08	2.16	2.29	10
Orhy	0.16	18.60	22.86	25	Pose	0.07	1.89	2.01	25
Pose	0.28	32.56	40.00	60	Sihy	0.01	0.27	0.29	10
Sihy	0.13	15.12	18.57	40	Grass Total	3.49	94.33	100.00	
Grass Total	0.70	81.40	100.00		Alte	0.01	0.27	4.76	5
Alte	0.01	1.16	6.25	5	Crfc	0.01	0.27	4.76	5
Eren	0.03	3.49	18.75	25	Phho	0.05	1.35	23.81	25
Pefr	0.01	1.16	6.25	10	Phlo	0.12	3.24	57.15	80
Phho	0.10	11.63	62.50	100	Cora	0.02	0.54	9.52	15
Lare	0.01	1.16	6.25	10	Forb Total	0.21	5.67	100.00	
Forb Total	0.16	18.60	100.00		Grass and Forb Total	3.70	100.00		
Grass and Forb Total	0.86	100.00							

POWDER RIM ALLOTMENT - PASTURE B

C9-1

C10-1

Artr-Agsm Type
NE exp., 2° slopeArtr-Agsm Type
SW exp., 0.25° slope

30 June 1971

6 July 1971

	Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.		Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.
Artr	8.09			75	Artr	9.86			50
Atco	0.56			15					
Koam	0.03			10	Shrub Total	9.86			
Shrub Total	8.68				Agsm	0.77	45.05	76.24	80
Agsm	0.82	66.68	79.62	70	Kocr	0.05	2.92	4.95	5
Orhy	0.06	4.88	5.82	10	Orhy	0.01	0.58	0.99	5
Pose	0.10	8.13	9.71	55	Pose	0.06	3.51	5.94	35
Sihi	0.02	1.63	1.94	15	Sihi	0.04	2.34	3.96	15
Stco	0.03	2.44	2.91	5	Stco	0.08	4.68	7.92	5
Grass Total	1.03	83.76	100.00		Grass Total	1.01	59.08	100.00	
Andi	0.01	0.81	5.00	5	Alte	0.01	0.58	1.43	10
Arabis spp.	0.01	0.81	5.00	5	Arabis spp.	0.02	1.17	2.86	15
Aspu	0.01	0.81	5.00	5	Aspu	0.01	0.58	1.43	10
Crepis spp.	0.01	0.81	5.00	5	Erov	0.22	12.87	31.42	50
Eren	0.01	0.81	5.00	10	Erpu	0.05	2.92	7.14	45
Phho	0.09	7.32	45.00	70	Haac	0.28	16.37	40.00	55
Spco	0.01	0.81	5.00	5	Pefr	0.01	0.58	1.43	10
Trey	0.01	0.81	5.00	5	Phho	0.10	5.85	14.29	75
Alde	0.01	0.81	5.00	10	Forb Total	0.70	40.92	100.00	
Lare	0.02	1.63	10.00	20	Grass and Forb Total	1.71	100.00		
Unid.	0.01	0.81	5.00	10					
Forb Total	0.20	16.24	100.00						
Grass and Forb Total	1.23	100.00							



POWDER RIM ALLOTMENT - PASTURE B

Exclosure I

Atga & Artr Types
0 slope

Outside Tr. 1

Inside Tr. 1

5 July 1971

8 July 1971

	Cover %	Comp. % all G & F	Comp. % by Group	% Freq.		Cover %	Comp. % all G & F	Comp. % by Group	% Freq.
	Avg.					Avg.			
Arsp	4.99			70	Arsp	1.05			10
Artr	3.51			15	Atga	12.60			70
Atga	1.54			55					
Chvi	0.30			5	Shrub Total	13.65			
Shrub Total	10.34				Agsm	0.81	71.70	74.32	30
					Orhy	0.06	5.31	5.50	10
Agsm	0.93	66.91	69.93	35	Pose	0.04	3.54	3.67	15
Orhy	0.11	7.91	8.27	15	Sihy	0.18	15.93	16.51	20
Pose	0.13	9.35	9.77	10	Grass Total	1.09	96.48	100.00	
Sihy	0.16	11.51	12.03	20					
Grass Total	1.33	95.68	100.00		Cyac	0.01	0.88	25.00	5
					Phho	0.01	0.88	25.00	5
Alte	0.01	0.72	16.67	5	Lare	0.01	0.88	25.00	10
Cyac	0.01	0.72	16.67	5	Saka	0.01	0.88	25.00	5
Phho	0.02	1.44	33.32	15					
Toin	0.01	0.72	16.67	5	Forb Total	0.04	3.52	100.00	
Lare	0.01	0.72	16.67	5					
Forb Total	0.06	4.32	100.00		Grass and Forb Total	1.13	100.00		
Grass and Forb Total	1.39								



POWDER RIM ALLOTMENT - PASTURE B

Exclosure I

Atga & Artr Types
0 slope

Outside Tr. 2

Inside Tr. 2

8 July 1971

8 July 1971

	Cover %	Comp. % all G & F	Comp. % by Group	% Freq.		Cover %	Comp. % all G & F	Comp. % by Group	% Freq.
	Avg.					Avg.			
Arsp	2.26			10	Artr	15.11			55
Artr	9.62			55	Atga	1.30			20
Atga	0.09			20					
					Shrub Total	16.41			
Shrub Total	11.97								
					Agsm	0.84	73.04	75.67	80
Agsm	1.19	65.02	67.24	60	Orhy	0.06	5.22	5.41	10
Orhy	0.13	7.10	7.34	20	Pose	0.01	0.87	0.90	5
Pose	0.31	16.94	17.51	35	Sihy	0.20	17.39	18.02	30
Sihy	0.14	7.65	7.91	25					
					Grass Total	1.11	96.52	100.00	
Grass Total	1.77	96.71	100.00						
					Phho	0.01	0.87	25.00	5
Phho	0.01	0.55	16.67	5	Chat	0.01	0.87	25.00	5
Chat	0.02	1.09	33.32	20	Lare	0.02	1.74	50.00	20
Monu	0.01	0.55	16.67	5					
Lare	0.01	0.55	16.67	5	Forb Total	0.04	3.48	100.00	
Saka	0.01	0.55	16.67	5					
					Grass and				
Forb Total	0.06	3.29	100.00		Forb Total	1.15	100.00		
Grass and									
Forb Total	1.83	100.00							

POWDER RIM ALLOTMENT - PASTURE B

Exclosure II

Game & Livestock Exclusion

Juos Type

S exp., 4° slope

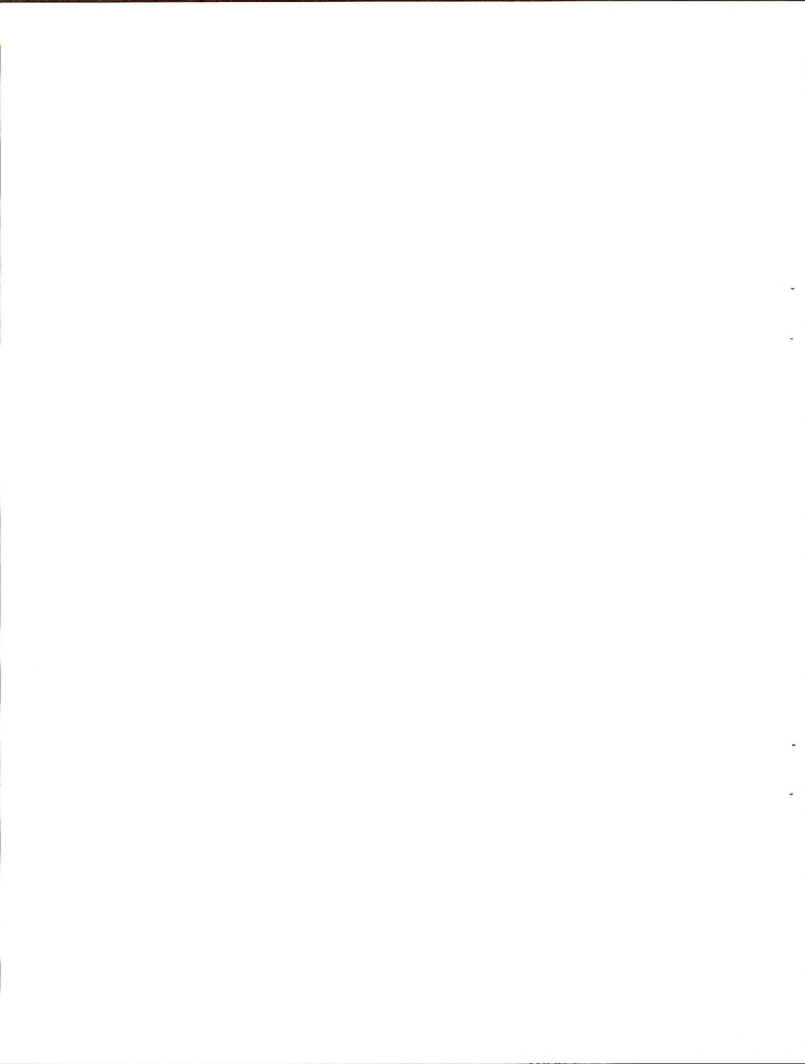
Inside Tr. 1

Inside Tr. 2

14 July 1971

14 July 1971

	Cover %	Comp. % all	Comp. % by	%		Cover %	Comp. % all	Comp. % by	%
	Avg.	G & F	Group	Freq.		Avg.	G & F	Group	Freq.
Juos	6.25			15	Arno	0.05			5
Shrub Total	6.25				Juos	33.25			50
					Shrub Total	33.30			
Agsp	0.06	1.86	85.71	15	Agsp	0.08	5.00	88.89	10
Cafi	0.01	0.31	14.29	5	Pose	0.01	0.63	11.11	5
Grass Total	0.07	2.17	100.00		Grass Total	0.09	5.63	100.00	
Arfe	0.03	0.93	0.95	25	Arabid spp.	0.01	0.63	0.66	5
Asdi	0.01	0.31	0.32	10	Arfe	0.06	3.75	3.97	35
Crfe	0.01	0.31	0.32	5	Crfe	0.01	0.63	0.66	5
Eren	0.01	0.31	0.32	10	Eren	0.03	1.88	1.99	25
Haac	2.81	87.28	89.19	65	Haac	1.36	84.97	90.07	60
Oppo	0.25	7.76	7.94	5	Phau	0.01	0.63	0.66	5
Pefr	0.01	0.31	0.32	10	Phho	0.03	1.88	1.99	10
Phau	0.01	0.31	0.32	5					
Phho	0.01	0.31	0.32	5	Forb Total	1.51	94.37	100.00	
Forb Total	3.15	97.83	100.00		Grass and				
Grass and					Forb Total	1.60	100.00		
Forb Total	3.22	100.00							



POWDER RIM ALLOTMENT - PASTURE B

Exclosure II

Game & Livestock Exclusion

Juos Type

S exp., 40 slope

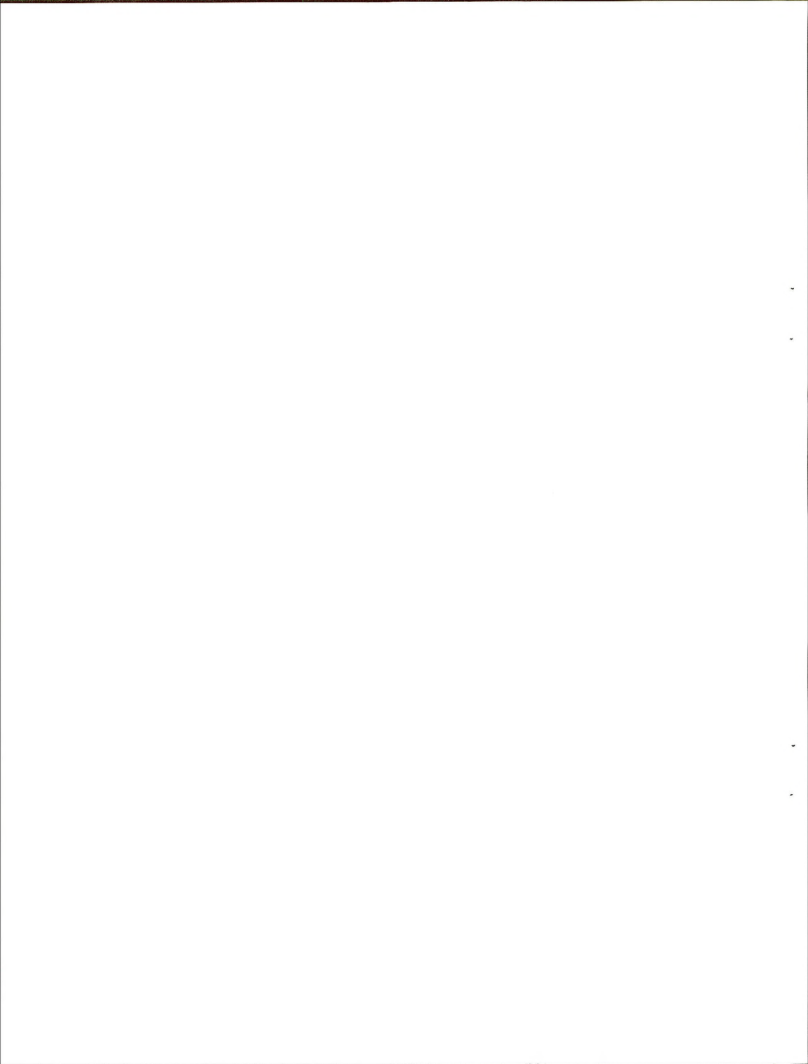
Outside Tr. 1

Outside Tr. 2

14 July 1971

14 July 1971

	Cover %	Comp. % all	Comp. % by	% %		Cover %	Comp. % all	Comp. % by	% %
	Avg.	G & F	Group	Freq.		Avg.	G & F	Group	Freq.
Arno	0.35			10	Arno	0.36			15
Juos	27.75			50	Juos	21.75			35
Shrub Total	28.10				Shrub Total	22.11			
Agsp	0.16	18.60	100.00	20	Agsp	0.13	5.08	65.00	15
					Pose	0.02	0.78	10.00	15
Grass Total	0.16	18.60	100.00		Stco	0.05	1.95	25.00	5
Arfe	0.01	1.16	1.43	10	Grass Total	0.20	7.61	100.00	
Asdi	0.01	1.16	1.43	10					
Eren	0.01	1.16	1.43	10	Arfe	0.06	2.34	2.54	20
Ermi	0.01	1.16	1.43	5	Aspu	0.01	0.39	0.42	5
Haac	0.63	73.27	90.00	20	Crfc	0.01	0.39	0.42	10
Phau	0.01	1.16	1.43	5	Eren	0.03	1.17	1.27	30
Phho	0.02	2.33	2.85	15	Haac	2.22	86.73	94.09	55
Forb Total	0.70	81.40	100.00		Pepr	0.01	0.39	0.42	10
					Phho	0.01	0.39	0.42	5
Grass and					Chfr	0.01	0.39	0.42	10
Forb Total	0.86	100.00			Forb Total	2.36	92.19	100.00	
					Grass and				
					Forb Total	2.56	100.00		



POWDER RIM ALLOTMENT - PASTURE C

C1-1

C2-1

Artr-Agsm Type
E Ne Exp., 1.5° slope

Artr-Agsm Type
S SW exp., 2° slope

16 June 1971

17 June 1971

Cover %	Comp. % all	Comp. % by	%		Cover %	Comp. % all	Comp. % by	%
Avg.	G & F	Group	Freq.		Avg.	G & F	Group	Freq.
Artr	8.30			55	Artr	11.30		75
Chvi	0.15			5	Atco	0.10		10
Eula	0.01			5	Atga	0.71		15
Koam	0.03			5	Chvi	0.40		5
					Grsp	0.05		5
Shrub Total	8.49				Shrub Total	12.56		
Agsm	0.41	35.98	48.24	80	Orhy	0.18	41.83	66.67 10
Orhy	0.20	17.54	23.53	45	Sihy	0.06	13.95	22.22 15
Pose	0.13	11.40	15.29	40	Brte	0.02	4.65	7.41 15
Sihy	0.11	9.65	12.94	20	Fecc	0.01	2.33	3.70 10
Grass Total	0.85	74.57	100.00		Grass Total	0.27	62.76	100.00
Alte	0.03	2.63	10.34	30	Arabis spp.	0.01	2.33	6.25 10
Andi	0.06	5.26	20.69	15	Cyac	0.01	2.33	6.25 5
Arabis spp.	0.01	0.88	3.45	5	Eren	0.01	2.33	6.25 10
Crepis spp.	0.02	1.75	6.90	20	Erov	0.10	23.26	62.50 5
Cyac	0.02	1.75	6.90	20	Lepu	0.01	2.33	6.25 5
Eren	0.03	2.63	10.34	25	Phho	0.01	2.33	6.25 5
Pefr	0.01	0.88	3.45	5	Erce	0.01	2.33	6.25 10
Phho	0.05	4.39	17.24	45	Forb Total	0.16	37.24	100.00
Phlo	0.02	1.75	6.90	15	Grass and			
Trgy	0.03	2.63	10.34	25	Forb Total	0.43	100.00	
Lare	0.01	0.88	3.45	5				
Forb Total	0.29	25.43	100.00					
Grass and								
Forb Total	1.14	100.00						

POWDER RIM ALLOTMENT - PASTURE C

C2-2

C3-1

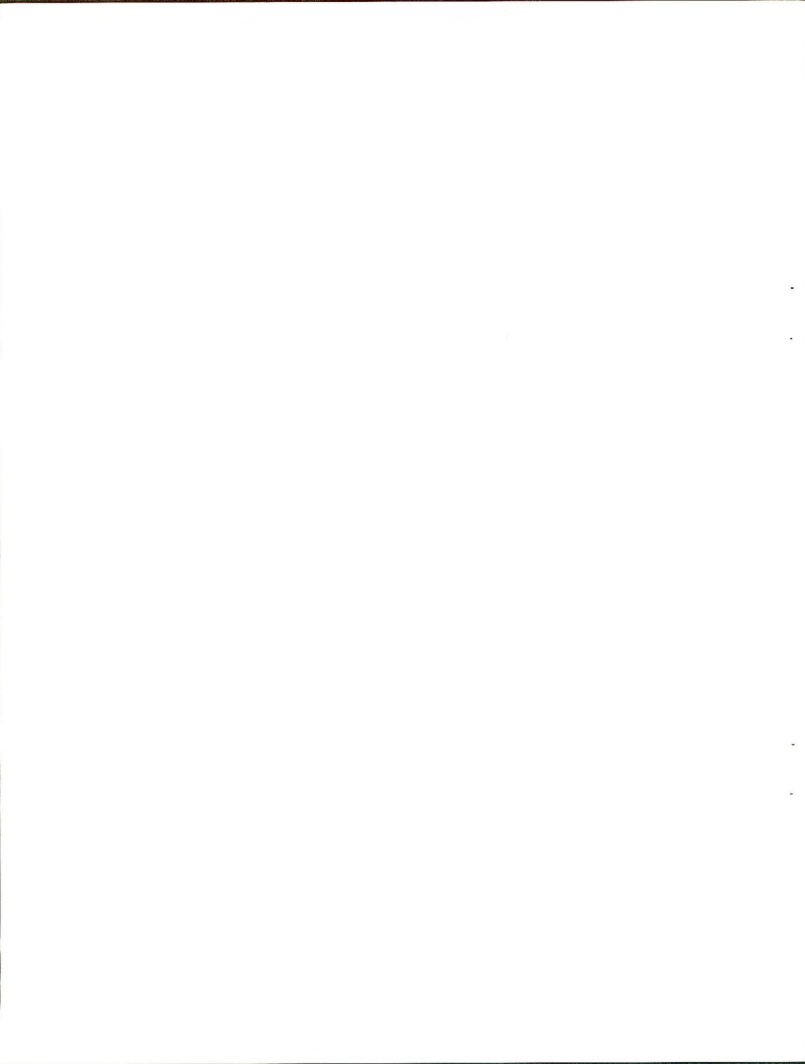
Artr-Agsm Type
S SW exp., 2.5° slope

Artr-Cael Type
S SW exp., 1° slope

17 June 1971

17 June 1971

	Cover %	Comp. % all	Comp. % by	% Freq.		Cover %	Comp. % all	Comp. % by	% Freq.
	Avg.	G & F	Group			Avg.	G & F	Group	
Artr	10.19			85	Artr	7.53			70
Atco	0.08			10					
Atga	0.50			5	Shrub Total	7.53			
Chvi	0.13			15					
Shrub Total	10.90				Cael	0.62	44.30	50.00	45
					Orhy	0.06	4.29	4.84	10
Agsm	1.70	72.05	82.52	55	Pose	0.21	15.00	16.94	40
Orhy	0.18	7.63	8.74	25	Sihi	0.05	3.57	4.03	25
Sihi	0.06	2.54	2.91	35	Stco	0.30	21.43	24.19	45
Stco	0.08	3.39	3.88	10	Grass Total	1.24	88.59	100.00	
Brte	0.01	0.42	0.49	5					
Feoc	0.03	1.27	1.46	25	Alte	0.02	1.43	12.50	20
Grass Total	2.06	87.30	100.00		Anbr	0.01	0.71	6.25	5
					Eren	0.03	2.14	18.75	30
Eren	0.02	0.85	6.67	20	Oppo	0.01	0.71	6.25	5
Erov	0.05	2.12	16.67	5	Phho	0.07	5.00	43.75	20
Oppo	0.20	8.47	66.67	10	Spco	0.01	0.71	6.25	5
Phho	0.01	0.42	3.33	5	Lare	0.01	0.71	6.25	5
Alde	0.01	0.42	3.33	5	Forb Total	0.16	11.41	100.00	
Lare	0.01	0.42	3.33	5					
Forb Total	0.30	12.70	100.00		Grass and				
					Forb Total	1.40	100.00		
Grass and									
Forb Total	2.36	100.00							



POWDER RIM ALLOTMENT - PASTURE C

C4-1

Artr-Stco Type
S exp., 1° slope

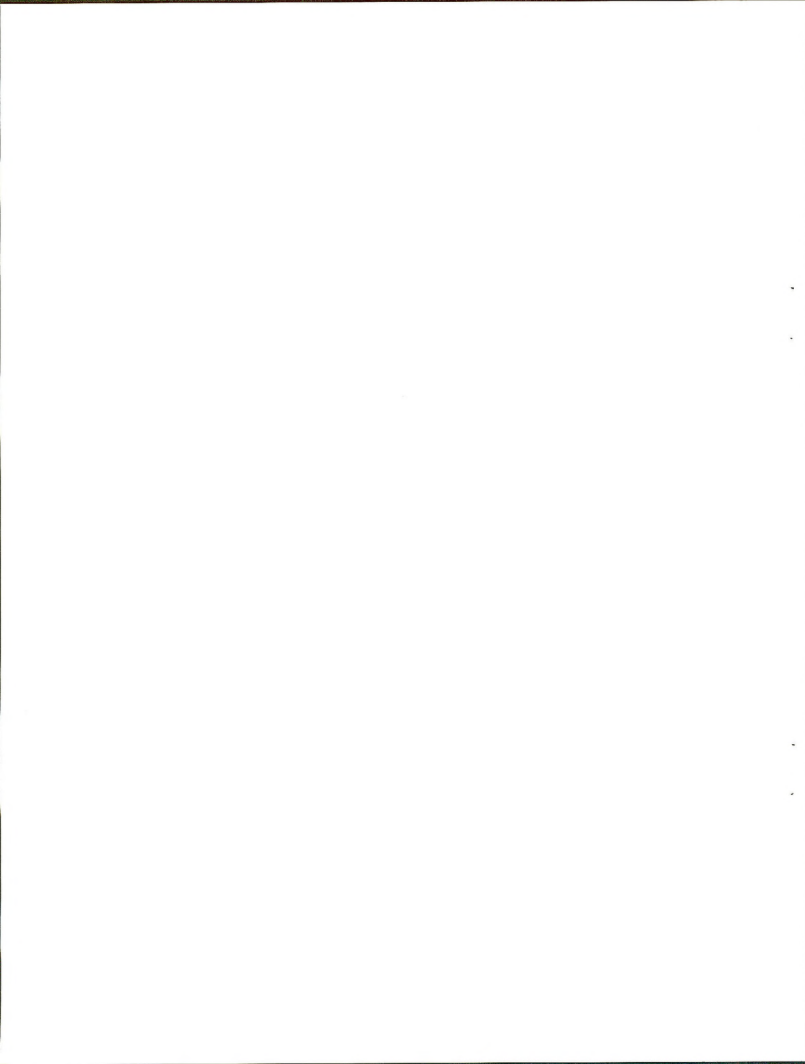
16 June 1971

C5-1

Artr-Stco Type
S exp., 1.5° slope

17 June 1971

	Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.		Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.
Artr	11.01			50	Artr	15.30			75
Atco	0.05			5					
Atga	0.05			5	Shrub Total	15.30			
Chvi	0.91			25					
Shrub Total	12.02				Agsm	0.26	17.45	21.14	30
					Orhy	0.01	0.67	0.81	10
Agsm	0.09	5.39	5.56	25	Sihy	0.12	8.05	9.76	30
Urny	0.10	5.99	6.17	10	Stco	0.82	55.05	66.66	70
Pose	0.01	0.60	0.62	10	Feoc	0.02	1.34	1.63	20
Sihy	0.17	10.18	10.49	35	Grass Total	1.23	82.56	100.00	
Stco	1.23	73.64	75.92	85					
Brte	0.01	0.60	0.62	5	Andi	0.05	3.36	19.23	10
Feoc	0.01	0.60	0.62	5	Eren	0.02	1.34	7.69	20
Grass Total	1.62	97.00	100.00		Erov	0.03	2.01	11.54	10
					Phho	0.07	4.70	26.92	30
Arabis spp.	0.01	0.60	20.00	5	Spec	0.02	1.34	7.69	20
Alde	0.03	1.80	60.00	25	Trgy	0.03	2.01	11.54	5
Cipu	0.01	0.60	20.00	5	Alde	0.03	2.01	11.54	25
					Oeco	0.01	0.67	3.85	5
Forb Total	0.05	3.00	100.00		Forb Total	0.26	17.44	100.00	
Grass and					Grass and				
Forb Total	1.67	100.00			Forb Total	1.49	100.00		



POWDER RIM ALLOTMENT - PASTURE C

C6-1

Artr-Agsm Type
SW exp., 4° slope

17 June 1971

	Cover %	Comp. % all G & F	Comp. % by Group	% Freq.
Artr	7.10			45
Atco	1.53			15
Chvi	0.50			30
Tenu	0.03			5
Shrub Total	9.16			
Agsm	0.87	63.11	66.92	80
Hija	0.03	2.17	2.31	5
Orhy	0.22	15.94	16.92	35
Pose	0.01	0.72	0.77	10
Sihy	0.01	0.72	0.77	5
Stco	0.14	10.14	10.77	30
Brte	0.01	0.72	0.77	5
Feoc	0.01	0.72	0.77	5
Grass Total	1.30	94.24	100.00	
Cyac	0.01	0.72	12.50	5
Eren	0.01	0.72	12.50	10
Ermi	0.01	0.72	12.50	5
Phho	0.01	0.72	12.50	5
Alde	0.01	0.72	12.50	10
Asge	0.01	0.72	12.50	10
Erce	0.01	0.72	12.50	5
Oeco	0.01	0.72	12.50	5
Forb Total	0.08	5.76	100.00	
Grass and Forb Total	1.38	100.00		



POWDER RIM ALLOTMENT - PASTURE C

Exclosure

Artr-Agsm Type - No Spray
0 slope

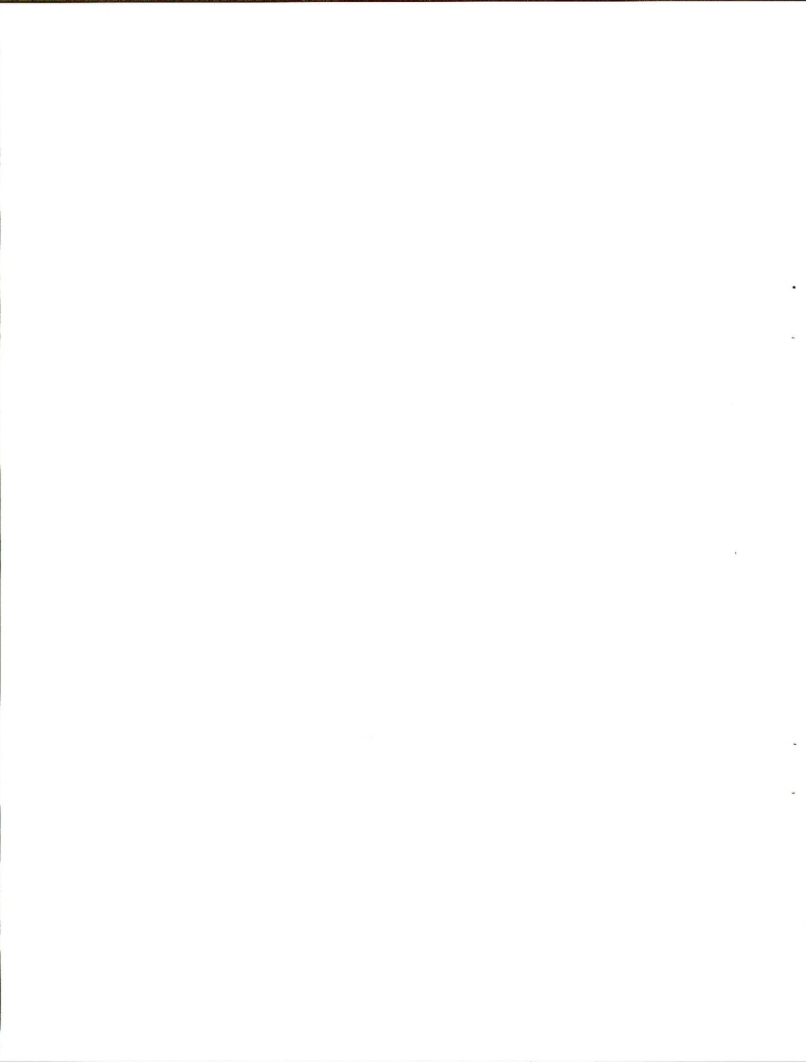
Outside

Inside

18 June 1971

18 June 1971

	Cover %	Comp. % all G & F	Comp. % by Group	% Freq.		Cover %	Comp. % all G & F	Comp. % by Group	% Freq.
	Avg.					Avg.			
Artr	5.28			55	Arsp	0.55			10
Atco	0.06			10	Artr	7.26			60
Chvi	0.50			5	Atco	1.85			10
					Chvi	0.75			5
Shrub Total	5.84				Shrub Total	10.41			
Agsm	0.03	8.57	18.75	5	Agsm	0.21	17.80	25.61	15
Pose	0.04	11.43	25.00	20	Orhy	0.03	2.54	3.66	10
Sihi	0.07	20.00	43.75	30	Pose	0.11	9.32	13.41	20
Stco	0.01	2.86	6.25	5	Sihi	0.25	21.18	30.49	50
Feoc	0.01	2.86	6.25	5	Stco	0.22	18.64	26.83	20
Grass Total	0.16	45.72	100.00		Grass Total	0.82	69.49	100.00	
Andi	0.01	2.86	5.26	5	Arabis spp.	0.01	0.85	2.78	5
Eren	0.01	2.86	5.26	10	Aspu	0.01	0.85	2.78	5
Phho	0.12	34.27	63.17	80	Cyac	0.01	0.85	2.78	10
Sili	0.01	2.86	5.26	10	Eren	0.02	1.69	5.56	15
Spco	0.02	5.71	10.53	20	Oppo	0.10	8.47	27.78	5
Alde	0.01	2.86	5.26	10	Phho	0.15	12.71	41.65	60
Saka	0.01	2.86	5.26	10	Spco	0.01	0.85	2.78	5
Forb Total	0.19	54.28	100.00		Alde	0.05	4.24	13.89	45
Grass and					Forb Total	0.36	30.51	100.00	
Forb Total	0.35	100.00			Grass and				
					Forb Total	1.18	100.00		



POWDER RIM ALLOTMENT - PASTURE C

Exclosure

Artr-Agsm Type - Sprayed
0 slope

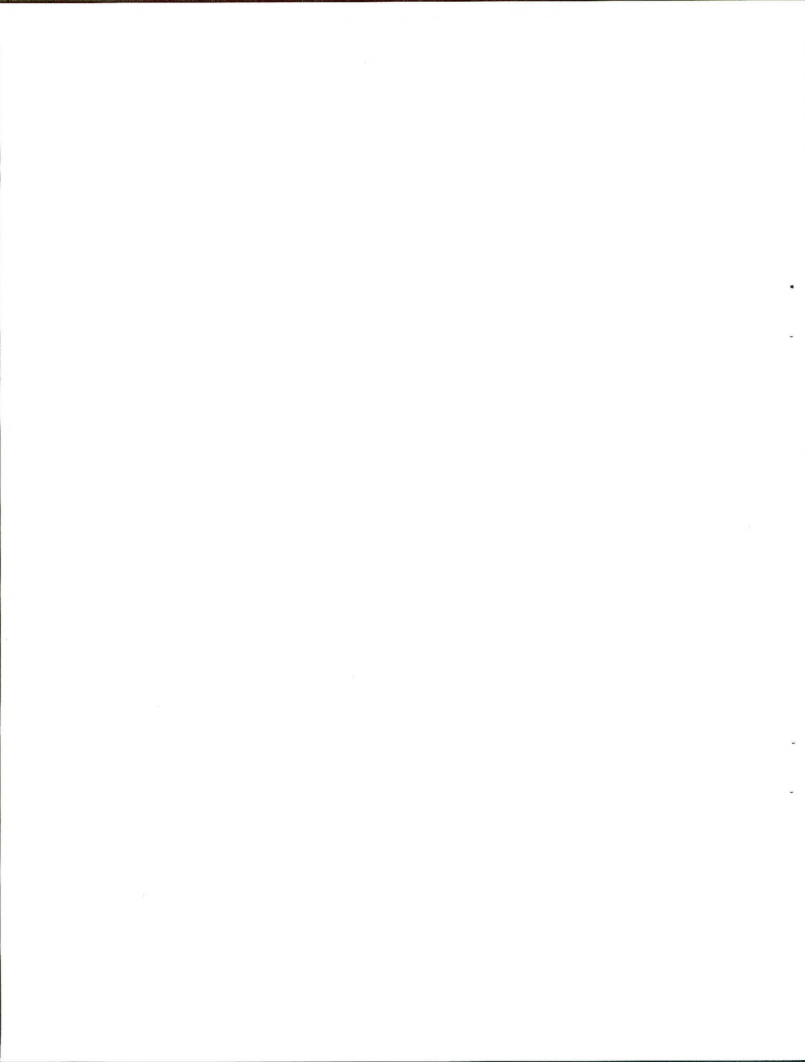
Outside

Inside

18 June 1971

18 June 1971

	Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.		Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.
Artr	4.31			40	Artr	1.31			25
Atco	3.75			10	Chvi	1.35			10
Shrub Total	8.06				Shrub Total	2.66			
Agsm	0.06	4.41	6.32	10	Agsm	0.06	5.36	6.19	20
Pose	0.12	8.82	12.63	30	Pose	0.01	0.89	1.03	5
Sihiy	0.34	25.00	35.79	45	Sihiy	0.14	12.50	14.43	30
Stco	0.43	31.60	45.26	40	Stco	0.75	66.97	77.32	85
					Feoc	0.01	0.89	1.03	5
Grass Total	0.95	69.83	100.00		Grass Total	0.97	86.61	100.00	
Eren	0.01	0.74	2.44	10	Eren	0.01	0.89	6.67	5
Erov	0.05	3.68	12.20	5	Phho	0.04	3.57	26.67	35
Maca	0.01	0.74	2.44	5	Alde	0.08	7.14	53.33	80
Oppo	0.18	13.24	43.90	10	Erce	0.02	1.79	13.33	15
Phhc	0.03	2.21	7.32	30					
Alde	0.10	7.35	24.38	100	Forb Total	0.15	13.39	100.00	
Depi	0.01	0.74	2.44	5					
Saka	0.02	1.47	4.88	15	Grass and Forb Total	1.12	100.00		
Forb Total	0.41	30.17	100.00						
Grass and Forb Total	1.36	100.00							



POWDER RIM ALLOTMENT - PASTURE D

C1-1

Artr-Eula-Agsm Type
E exp., 3° slope

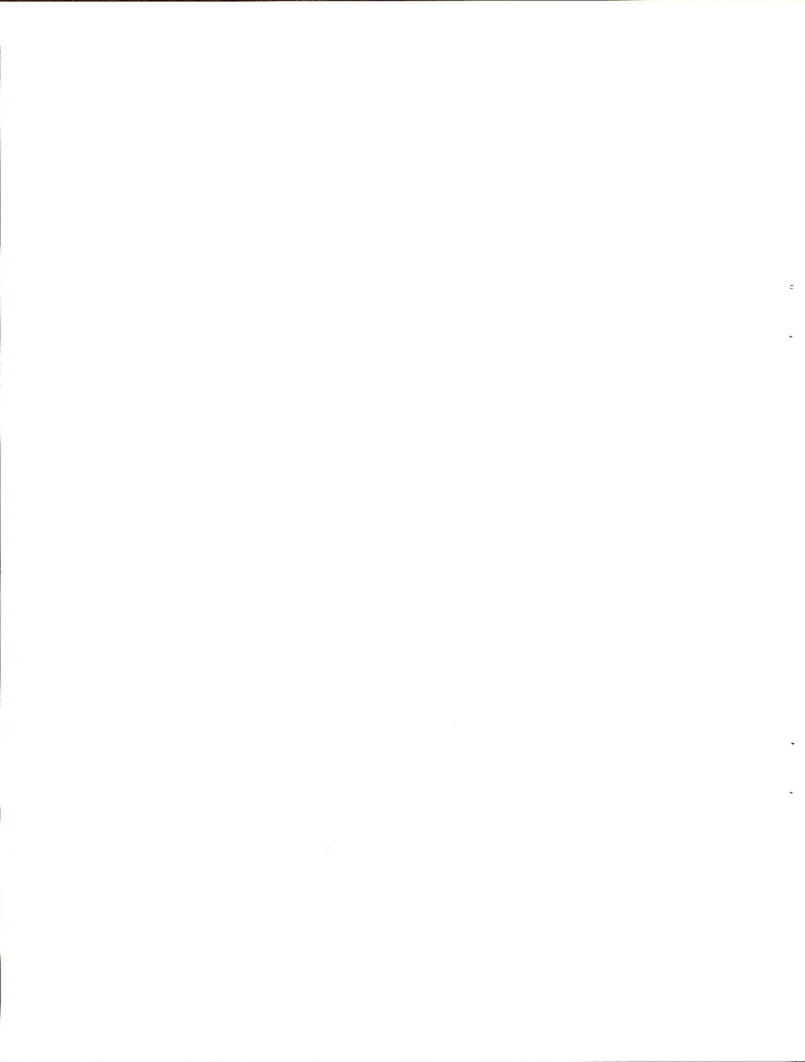
24 June 1971

C2-1

Artr-Agsm Type
S exp., 4° slope

30 June 1971

	Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.		Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.
Artr	1.76			30	Artr	3.80			35
Atga	0.35			5	Atco	0.25			5
Chvi	0.14			20	Atga	0.03			5
Eula	1.41			45					
Shrub Total	3.66				Shrub Total	4.08			
Agsm	0.83	37.90	42.56	95	Agsm	1.06	43.80	50.25	95
Orhy	0.80	36.52	41.03	85	Orhy	0.03	1.24	1.42	10
Pose	0.28	12.79	14.36	60	Pose	0.03	1.24	1.42	30
Sihy	0.03	1.37	1.54	10	Stco	0.98	40.50	46.44	95
Stco	0.01	0.46	0.51	5	Feoc	0.01	0.41	0.47	10
Grass Total	1.95	89.04	100.00		Grass Total	2.11	87.19	100.00	
Alte	0.02	0.91	8.33	15	Anbr	0.01	0.41	3.22	5
Anbr	0.01	0.46	4.17	5	Andi	0.03	1.24	9.67	5
Eren	0.02	0.91	8.33	20	Eren	0.05	2.07	16.12	50
Oppo	0.03	1.37	12.50	5	Maca	0.01	0.41	3.22	5
Phho	0.05	2.28	20.83	50	Oppo	0.08	3.31	25.87	5
Alde	0.01	0.46	4.17	5	Phho	0.02	0.83	6.45	15
Chde	0.06	2.74	25.00	60	Phlo	0.05	2.07	16.12	45
Depi	0.01	0.46	4.17	5	Spec	0.03	1.24	9.67	30
Gipu	0.02	0.91	8.33	20	Trgy	0.01	0.41	3.22	5
Lare	0.01	0.46	4.17	5	Alde	0.01	0.41	3.22	10
Forb Total	0.24	10.96	100.00		Plpa	0.01	0.41	3.22	5
Grass and Forb Total	2.19	100.00			Forb Total	0.31	12.81	100.00	
					Grass and Forb Total	2.42	100.00		



POWDER RIM ALLOTMENT - PASTURE D

C3-1

C4-1

Artr-Agsm Type

Save-Arsp Type

E NE exp., 1,50 slope

E exp., 0,250 slope

1 July 1971

4 July 1971

	Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.		Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.
Artr	15.05			65	Arsp	0.56			50
Chvi	0.05			5	Atga	1.04			20
					Koam	0.71			65
Shrub Total	15.10				Save	1.03			10
Agsm	1.33	86.35	93.67	16	Shrub Total	3.34			
Pose	0.07	4.55	4.93	50					
Sihy	0.01	0.65	0.70	5	Agsm	0.03	3.37	37.50	5
Stco	0.01	0.65	0.70	5	Pose	0.05	5.62	62.50	10
Grass Total	1.42	92.20	100.00		Grass Total	0.08	8.99	100.00	
Alte	0.02	1.30	16.66	20	Alte	0.01	1.12	1.23	10
Eren	0.02	1.30	16.67	15	Oppo	0.70	78.68	86.45	20
Erov	0.03	1.95	25.00	10	Alde	0.04	4.49	4.94	35
Phho	0.02	1.30	16.67	20	Atwo	0.01	1.12	1.23	10
Phlo	0.03	1.95	25.00	25	Depi	0.01	1.12	1.23	5
					Gipu	0.01	1.12	1.23	10
Forb Total	0.12	7.80	100.00		Lare	0.01	1.12	1.23	10
Grass and					Lede	0.01	1.12	1.23	5
Forb Total	1.54	100.00			Monu	0.01	1.12	1.23	5
					Forb Total	0.81	91.01	100.00	
					Grass and				
					Forb Total	0.89	100.00		



POWDER RIM ALLOTMENT - PASTURE D

C5-1

Artr-Agsm Type
0 slope

2 July 1971

C5-2

Artr-Atga-Agsm Type
SW exp., 2.25° slope

2 July 1971

	Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.		Cover % Avg.	Comp. % all G & F	Comp. % by Group	% Freq.
Artr	15.85			75	Artr	2.63			20
Atco	0.25			15	Atco	0.50			5
					Atga	0.29			25
Shrub Total	16.10				Tenu	0.05			5
Agsm	1.98	70.96	74.44	75	Shrub Total	3.47			
Crhy	0.36	12.90	13.53	10	Agsm	4.36	88.28	91.24	85
Pose	0.18	6.45	6.77	65	Crhy	0.13	2.63	2.71	15
Sihy	0.14	5.02	5.26	55	Pose	0.26	5.26	5.43	45
Grass Total	2.66	95.33	100.00		Sihy	0.03	0.61	0.62	10
Aspu	0.01	0.36	7.69	5	Grass Total	4.78	96.78	100.00	
Phho	0.08	2.87	61.54	75	Alte	0.01	0.20	6.25	5
Phlo	0.03	1.08	23.08	10	Pefr	0.02	0.40	12.50	10
Sili	0.01	0.36	7.69	5	Phho	0.06	1.21	37.50	60
Forb Total	0.13	4.67	100.00		Phlo	0.04	0.81	25.00	35
Grass and					Sili	0.01	0.20	6.25	5
Forb Total	2.79	100.00			Trgy	0.01	0.20	6.25	10
					Lare	0.01	0.20	6.25	10
					Forb Total	0.16	3.22	100.00	
					Grass and				
					Forb Total	4.94	100.00		

POWDER RIM ALLOTMENT - PASTURE D

C6-1

Artr-Agsm Type
E exp., 0.5° slope

22 June 1971

C7-1

Juos Type
S exp., 5.5° slope

22 June 1971

	Cover %	Comp. % all	Comp. % by	% Freq.		Cover %	Comp. % all	Comp. % by	% Freq.
	Avg.	G & F	Group			Avg.	G & F	Group	
Artr	9.59			65	Arno	4.55			30
Shrub Total	9.59				Artz	2.05			15
Agsm	3.85	81.40	86.72	100	Chvi	0.30			10
Kocr	0.18	3.81	4.05	20	Juos	12.26			25
Pofe	0.20	4.23	4.50	20	Putz	7.30			30
Pose	0.14	2.96	3.15	55	Shrub Total	26.46			
Sihiy	0.06	1.27	1.35	20	Agsm	1.04	52.00	61.18	70
Stco	0.01	0.21	0.23	5	Agsp	0.43	21.50	25.29	20
Grass Total	4.44	93.88	100.00		Kocr	0.06	3.00	3.53	15
Aggl	0.02	0.42	6.90	20	Orhy	0.01	0.50	0.59	5
Alte	0.01	0.21	3.45	10	Pofe	0.11	5.50	6.47	15
Arabis spp.	0.01	0.21	3.45	5	Pose	0.04	2.00	2.35	15
Crepis spp.	0.02	0.42	6.90	15	Sihiy	0.01	0.50	0.59	5
Eren	0.07	1.48	24.14	70	Grass Total	1.70	85.00	100.00	
Phho	0.01	0.21	3.45	5	Arfe	0.01	0.50	3.33	10
Phlo	0.05	1.06	17.24	50	Crepis spp.	0.01	0.50	3.33	10
Trgy	0.03	0.63	10.34	25	Erea	0.06	3.00	20.00	55
Cora	0.01	0.21	3.45	5	Erum	0.01	0.50	3.33	5
Lare	0.06	1.27	20.68	60	Pefr	0.02	1.00	6.68	20
Forb Total	0.29	6.12	100.00		Phho	0.01	0.50	3.33	5
Grass and					Sein	0.01	0.50	3.33	5
Forb Total	4.73	100.00			Trgy	0.04	2.00	13.34	40
					Chat	0.01	0.50	3.33	10
					Cora	0.06	3.00	20.00	60
					Crwa	0.01	0.50	3.33	10
					Posa	0.04	2.00	13.34	40
					Unid.	0.01	0.50	3.33	5
					Forb Total	0.30	15.00	100.00	
					Grass and				
					Forb Total	2.00	100.00		

POWDER RIM ALLOTMENT - PASTURE D

C8-1

C10-1

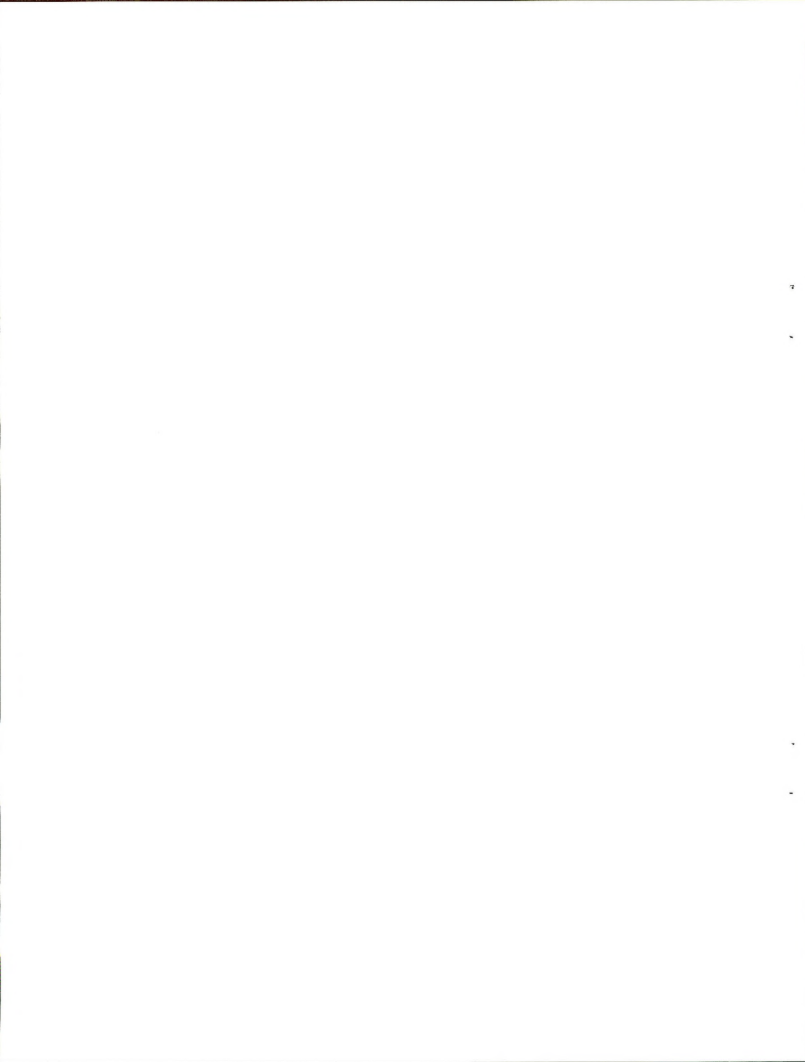
Atga Type
S exp., 2,25° slope

Atco Type
NE exp., 2° slope

1 July 1971

4 July 1971

	Cover %	Comp. % all G & F	Comp. % by Group	% Freq.		Cover %	Comp. % all G & F	Comp. % by Group	% Freq.
	Avg.					Avg.			
Atga	6.46			65	Atco	2.80			45
Shrub Total	6.46				Eula	0.91			40
					Shrub Total	3.71			
Agsm	0.50	23.47	25.13	15	Agsm	0.03	2.70	3.13	10
Orhy	0.51	23.94	25.62	35	Orhy	0.16	14.41	16.67	25
Pose	0.18	8.45	9.05	20	Pose	0.23	20.72	23.96	50
Sihiy	0.80	37.56	40.20	50	Sihiy	0.03	2.70	3.13	5
Grass Total	1.99	93.42	100.00		Stco	0.46	41.47	47.90	45
Cybu	0.02	0.94	14.29	20	Brte	0.05	4.50	5.21	30
Lare	0.06	2.82	42.86	55	Grass Total	0.96	86.50	100.00	
Monu	0.04	1.88	28.57	35	Eren	0.01	0.90	6.67	10
Saka	0.01	0.47	7.14	5	Alde	0.05	4.50	33.34	45
Siel	0.01	0.47	7.14	5	Gipu	0.02	1.80	13.33	20
Forb Total	0.14	6.58	100.00		Lare	0.02	1.80	13.33	15
Grass and					Lede	0.02	1.80	13.33	15
Forb Total	2.13	100.00			Plpa	0.01	0.90	6.67	10
					Saka	0.02	1.80	13.33	20
					Forb Total	0.15	13.50	100.00	
					Grass and				
					Forb Total	1.11	100.00		



POWDER RIM ALLOTMENT - PASTURE D

Exclosure

Atco Type
N exp., 2° slope

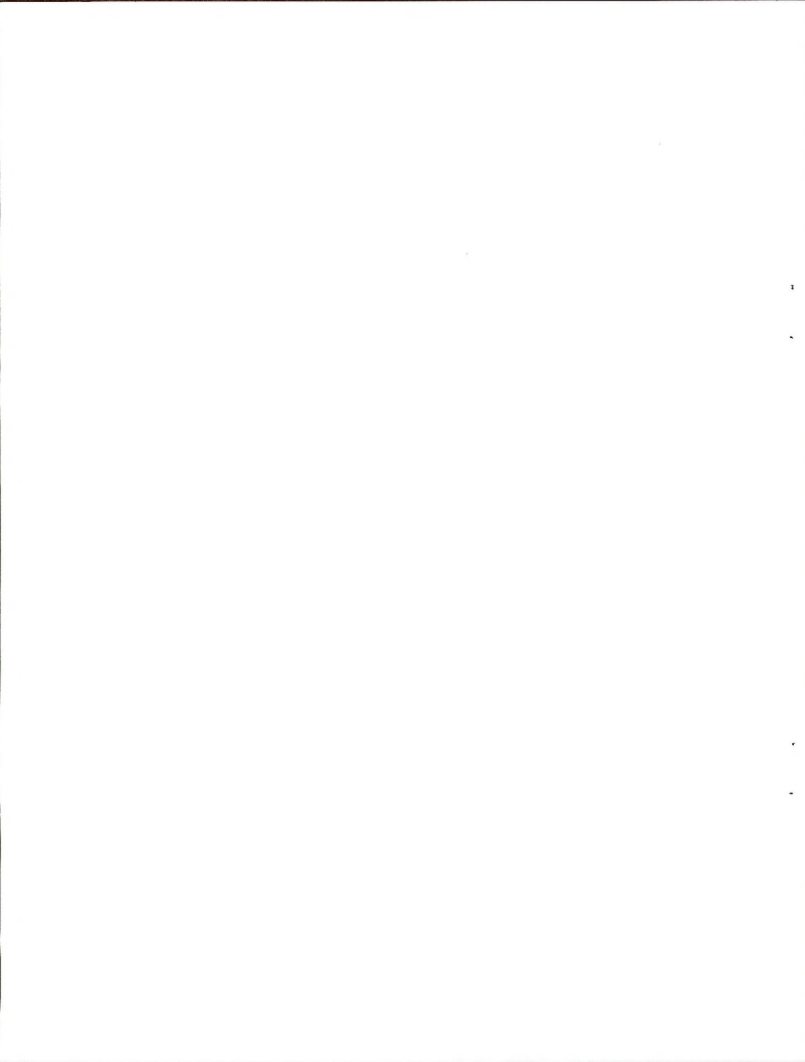
Outside

Inside

5 July 1971

5 July 1971

	Cover %	Comp. % all	Comp. % by			Cover %	Comp. % all	Comp. % by	
	Avg.	C & F	Group	% Freq.		Avg.	G & F	Group	% Freq.
Artr	2.55			60	Artr	2.98			35
Atco	1.53			15	Arsp	0.10			5
Chvi	1.10			15	Atco	0.10			10
Eula	0.10			5	Atga	0.10			5
					Chvi	0.15			5
Shrub Total	5.28				Koam	0.01			10
Agsm	0.03	1.80	2.04	5	Shrub Total	3.44			
Orhy	0.02	1.20	1.36	20	Agsm	0.11	4.85	4.98	25
Pose	0.11	6.59	7.48	40	Orhy	0.16	7.05	7.24	20
Stco	1.29	77.21	87.76	80	Pose	0.08	3.52	3.62	40
Feoc	0.02	1.20	1.36	20	Stco	1.86	81.94	84.16	90
Grass Total	1.47	88.00	100.00		Grass Total	2.21	97.36	100.00	
Cyac	0.01	0.60	5.00	5	Phlo	0.02	0.88	33.32	15
Eren	0.02	1.20	10.00	15	Depi	0.01	0.44	16.67	5
Lepu	0.01	0.60	5.00	5	Cipu	0.01	0.44	16.67	5
Cepa	0.01	0.60	5.00	5	Lare	0.01	0.44	16.67	5
Phlo	0.01	0.60	5.00	5	Lede	0.01	0.44	16.67	5
Spco	0.01	0.60	5.00	5	Forb Total	0.06	2.64	100.00	
Alde	0.01	0.60	5.00	5	Grass and				
Chde	0.01	0.60	5.00	5	Forb Total	2.27	100.00		
Erce	0.01	0.60	5.00	10					
Gipu	0.04	2.40	20.00	40					
Lare	0.01	0.60	5.00	10					
Lede	0.02	1.20	10.00	20					
Pipa	0.02	1.20	10.00	15					
Saka	0.01	0.60	5.00	10					
Forb Total	0.20	12.00	100.00						
Grass and									
Forb Total	1.67	100.00							



APPENDIX B

PLANT SPECIES CODES

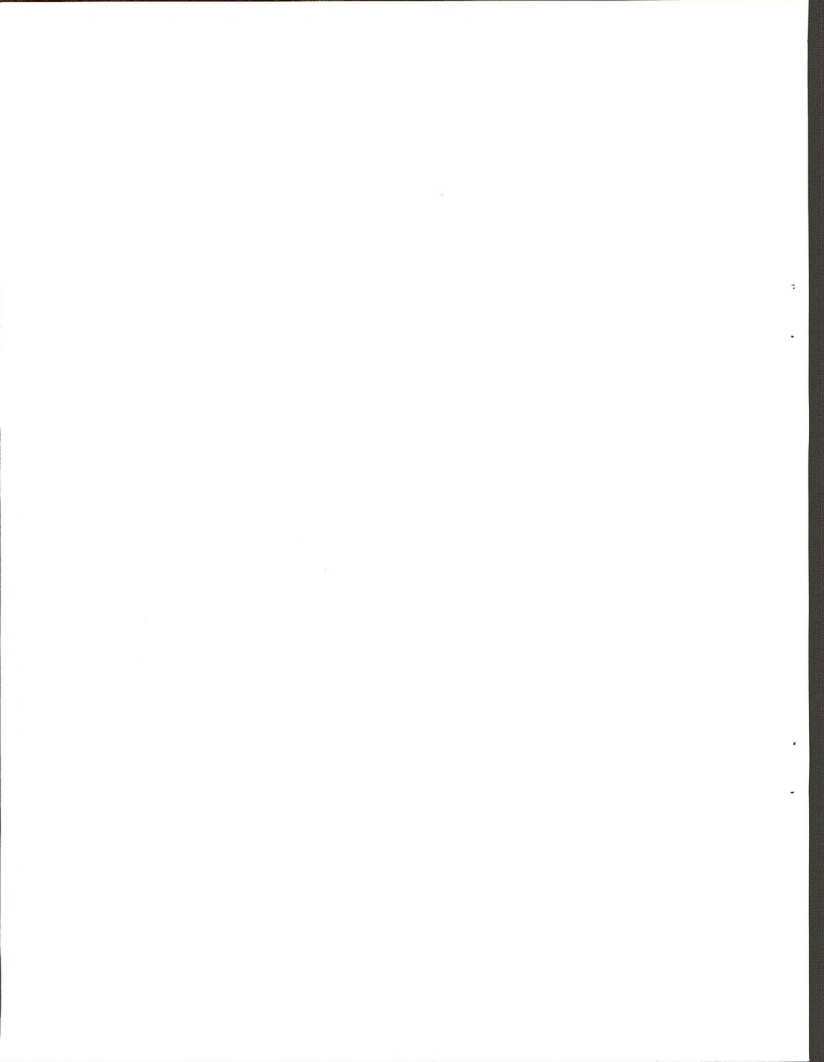
Code	Scientific Name	Common Name	Longevity
<u>Shrubs and Trees</u>			
Arfr	Artemisia frigida	Fringed sagewort	Perennial
Arno	Artemisia nova	Black sagebrush	Perennial
Arpe	Artemisia pedatifida	Birdfoot sagewort	Perennial
Arsp	Artemisia spinescens	Bud sagewort	Perennial
Artr	Artemisia tridentata	Basin big sagebrush	Perennial
Atco	Atriplex confertifolia	Shadscale saltbush	Perennial
Atga	Atriplex gardneri	Nuttall saltbush	Perennial
Cemo	Cercocarpus montanus	True mountain mahogany	Perennial
Chvi	Chrysothamnus viscidiflorus	Douglas rabbitbrush	Perennial
Eula	Eurotia lanata	Common winterfat	Perennial
Grsp	Grayia spinosa	Spiny hopsage	Perennial
Juos	Juniperus osteosperma	Utah juniper	Perennial
Koam	Kochia americana	Greenmolly summercypress	Perennial
Magl	Machaeranthera glabriuscula	Alkali aster	Perennial
Putr	Purshia tridentata	Antelope bitterbrush	Perennial
Save	Sarcobatus vermiculatus	Black greasewood	Perennial
Syor	Symphoricarpos oreophilus	Mountain snowberry	Perennial
Teca	Tetradymia canescens	Gray horsebrush	Perennial
Tenu	Tetradymia nuttallii	Nuttall horsebrush	Perennial

Grasses and Grass-Like Plants

Agsp	Agropyron spicatum	Bluebunch wheatgrass	Perennial
Agsm	Agropyron smithii	Western wheatgrass	Perennial
Brte	Bromus tectorum	Cheatgrass brome	Annual
Cael	Carex eleocharis	Needleleaf sedge	Perennial
Cafi	Carex filifolia	Threadleaf sedge	Perennial
Feoc	Festuca octoflora	Common sixweeksfeucue	Annual
Hija	Hilaria jamesii	Galleta hilaria	Perennial
Kocr	Koeleria cristata	Prairie junegrass	Perennial
Orny	Oryzopsis hymenoides	Indian ricegrass	Perennial
Pofe	Poa fendleriana	Mutton bluegrass	Perennial
Pose	Poa secunda	Sandberg bluegrass	Perennial
Sihy	Sitanion hystrix	Bottlebrush squirreltail	Perennial
Stco	Stipa comata	Needle and thread	Perennial

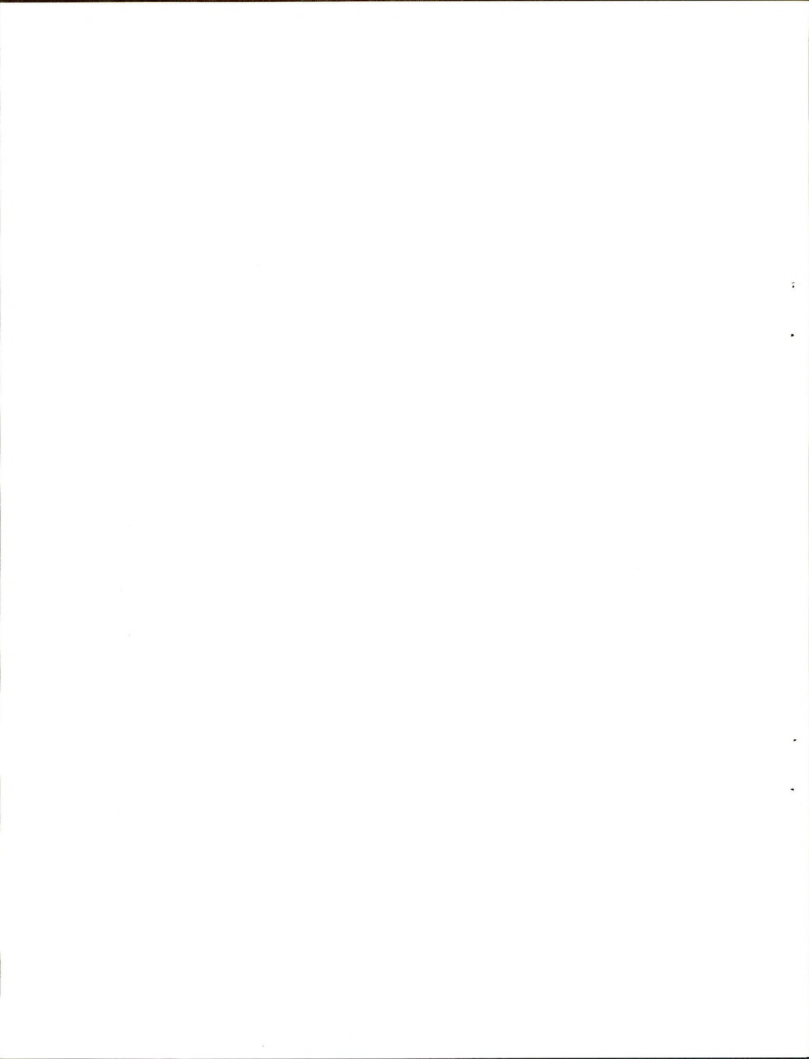
APPENDIX B (Contd.)

Code	Scientific Name	Common Name	Longevity
<u>Forbs</u>			
Aggl	Agoseris glauca	Pale agoseris	Perennial
Alac	Allium acuminatum	Tapertip onion	Perennial
Alte	Allium textile	Prairie onion	Perennial
Alie	Alyssum desertorum	Desert alyssum	Annual
Anbr	Androstephium breviflorum	Purple funnellily	Perennial
Andi	Antennaria dimorpha	Low pussytoes	Perennial
Arabis	Arabis crandellii	Crandell rockcress	Perennial
spp.	Arabis holboellii	Holboell rockcress	Perennial
	Arabis lignifera	Woody rockcress	Perennial
	Arabis pulchra	Beauty rockcress	Perennial
Arfe	Arenaria fendleri	Fendler sandwort	Perennial
Asci	Astragalus cibarius	Silky milkvetch	Perennial
Asdi	Astragalus diversifolius	Meadow milkvetch	Perennial
Asir	Astragalus drummondii	Drummond milkvetch	Perennial
Asge	Astragalus geyeri	Geyer milkvetch	Perennial
Aspu	Astragalus purshii	Pursh milkvetch	Perennial
Assp	Astragalus spatulatus	Spoonleaf milkvetch	Perennial
Aste	Astragalus tenellus	Pulse milkvetch	Perennial
Atar	Atriplex argentea	Tumbling saltbush	Annual
Atwo	Atriplex wolfii	Wolf saltbush	Annual
Basa	Balsamorhiza sagittata	Arrowleaf balsamroot	Perennial
Chat	Chenopodium atrovirens	Dark goosefoot	Annual
Chle	Chenopodium dessicatum	Desert goosefoot	Annual
Chfr	Chenopodium fremontii	Fremont goosefoot	Annual
Copa	Collinsia parviflora	Smallflowered blueeyedmary	Annual
Cora	Corydanthus raemosus	Bushy Birdbeak	Annual
Crepis	Crepis acuminata	Tapertip hawksbeard	Perennial
spp.	Crepis modocensis	Yellowstone hawksbeard	Perennial
	Crepis occidentalis	Western hawksbeard	Perennial
Crfc	Cryptantha flavoculata	Roughseed cryptantha	Perennial
Crke	Cryptantha kelseyana	Kelsey cryptantha	Annual
Crwa	Cryptantha watsonii	Watson cryptantha	Annual
Cyac	Cymopterus acaulis	Stemless springparsley	Perennial
Cybu	Cymopterus bulbosus	Onion springparsley	Perennial
Depi	Descurainia pinnata	Pinnate tansymustard	Annual
Erea	Erigeron eatoni	Eaton fleabane	Perennial
Eren	Erigeron engelmanni	Engelmann fleabane	Perennial
Erpu	Erigeron pumilus	Low fleabane	Perennial
Erce	Eriogonum cernuum	Nodding wildbuckwheat	Annual
Ermi	Eriogonum microthecum	Slenderbush wildbuckwheat	Perennial



APPENDIX B (Contd.)

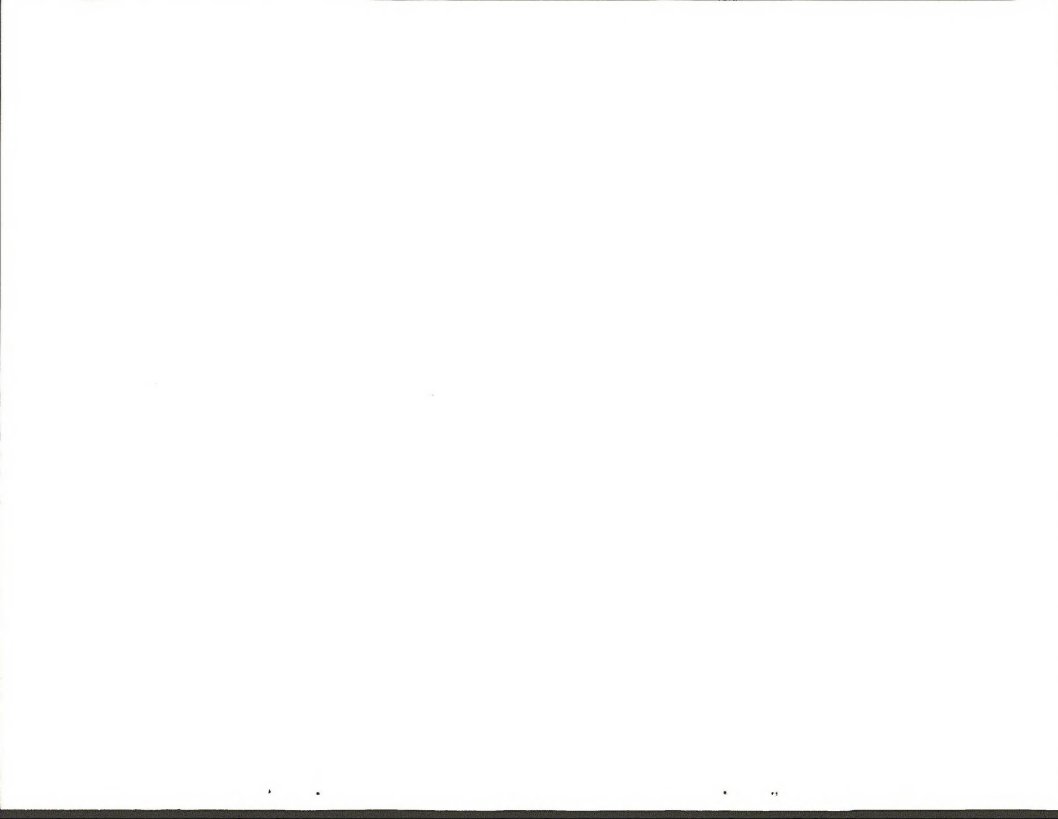
Code	Scientific Name	Common Name	Longevity
Erov	Eriogonum ovalifolium	Cushion wildbuckwheat	Perennial
Erum	Eriogonum umbellatum	Sulphur wildbuckwheat	Perennial
Gara	Gayophytum ramosissimum	Branchy groundsmoke	Annual
Gipu	Gilia pumila	Dwarf gilia	Annual
Gisi	Gilia sinuata	Rosy gilia	Annual
Gypa	Gymnostris parvula	Leafless falsephlox	Annual
Haac	Haplopappus acaulis	Stemless goldenweed	Perennial
Haar	Haplopappus armerioides	Thrifty goldenweed	Perennial
Lare	Lappula redowskii	Bluebur stickseed	Annual
Lede	Lepidium densiflorum	Prairie pepperweed	Annual
Lepu	Leptodactylon pungens	Granite gilia	Perennial
Lise	Linanthus septentrionalis	Sevenstar flaxflower	Annual
Lofo	Lomatium foeniculaceum	Hairyseed lomatium	Perennial
Luar	Lupinus argenteus	Silvery lupine	Perennial
Maca	Machaeranthera canescens	Hoary tansyaster	Perennial
Meal	Mentzelia albicaulis	Whitestem mentzelia	Annual
Migr	Microsteris gracilis	Microsteris	Annual
Monu	Monolepis nuttalliana	Nuttall monolepis	Annual
Oean	Oenothera aridina	Andean sundrops	Annual
Cepa	Oenothera pallida	Pale evening primrose	Perennial
Oppo	Opuntia polyacantha	Plains pricklypear	Perennial
Orfa	Orebanche fasciculata	Purple broomrape	Perennial
Pefr	Penstemon fremontii	Fremont penstemon	Perennial
Phho	Phlox hoodii	Hoods phlox	Perennial
Phlo	Phlox longifolia	Longleaf phlox	Perennial
Phau	Physaria australis	Common twinpod	Perennial
Flpa	Plantago patagonica	Wooly plantain	Annual
Posa	Polygonum sawatchense	Sawatch knotweed	Annual
Saka	Salsola kali	Common russianthistle	Annual
Sein	Senecio integerrimus	Lambstongue groundsel	Perennial
Siel	Sisymbrium elegans	Showy hedgemustard	Annual
Sili	Sisymbrium linifolium	Narrowleaf hedgemustard	Perennial
Spco	Sphaeralcea coccinea	Scarlet globemallow	Perennial
Toin	Townsendia incana	Hoary townsendia	Perennial
Trgy	Trifolium gymnocarpon	Hollyleaf clover	Perennial



APPENDIX C

Table 7. Percent utilization of grasses and shrubs after winter use by sheep during 1970-71. The figures are average utilization values for sampling sites obtained by estimating use within seven percentage classes and dividing by frequency of occurrence. For grasses, only use on new growth was estimated. For shrubs, utilization of the previous seasons growth was considered. Ten or more Artr and Atga bushes were examined at each site where they occurred. For other species occurrence, hence sample size, varies and only a rough index to utilization is obtained. The pastures were sampled on 1 May 1971.

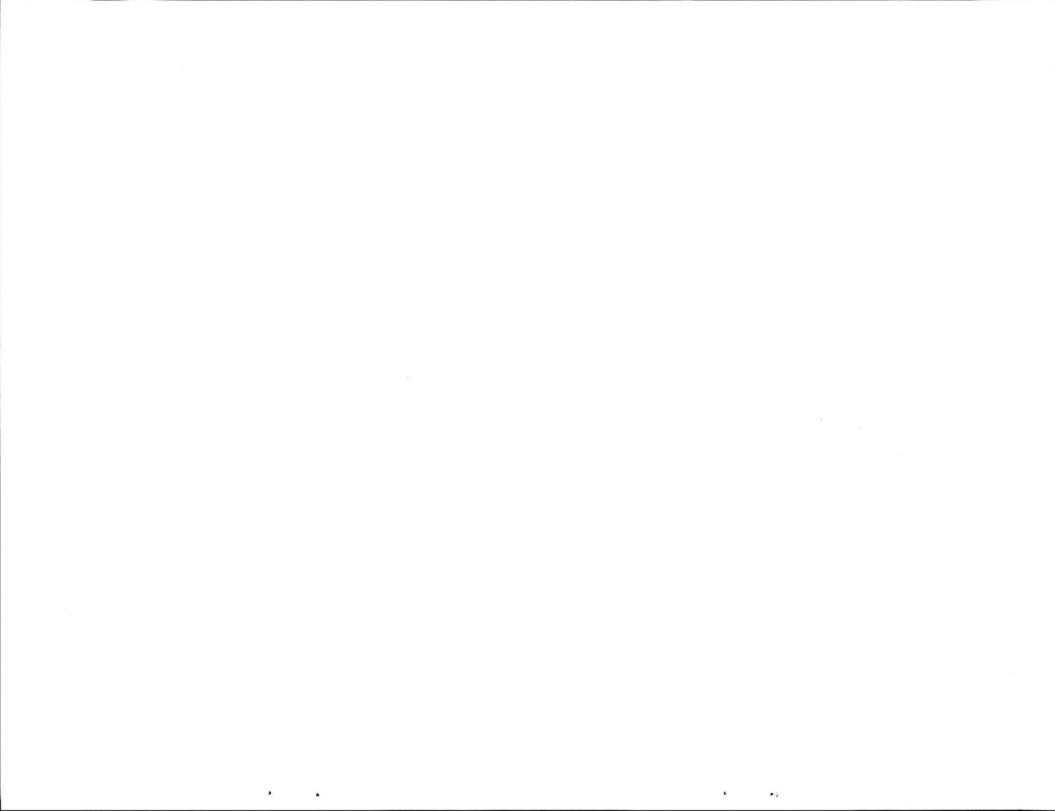
Pasture	Sampling																						
	Site	Agsm	Orhy	Stco	Pofe	Pose	Kocr	Agsp	Sihy	Cafi	Cael	Hija	Brte	Artr	Arsp	Arpe	Atco	Atga	Eula	Chvi	Magl	Save	
Pasture A (Grazed 1 Nov.-30 Apr.)	C1-1	6	2			5		5	5														
	C2-1	10		5		7		5	0													1	
	C3-1	5				0									6							66	
	C4-1	2							0						5							1	
	C5-1	5				5									5								
	C6-1	0	0			0									2								
	C7-1					0		0							5								
	Exc.	6			0	0	5	5															
Pasture B (Grazed 1 Nov.-30 Apr.)	C1-1		0						0									47					
	C2-1	5	10	30		0			0					6									
	C3-1	5	2			5			5											2	5		
	C4-1	0	50	2						11		0		5									
	C5-1	5				5	0	0						10					25				
	C6-1	7	19			0								10									
	C7-1	8	2			5				2						5		30		0			
	C8-1	9							0					7			50	38					
	C9-1	5	0	0		0			0					7									
	C10-1	2			15	0		0						5									
	Exc.		0			14		6	10									35					



APPENDIX C (Contd.)

Table 7.

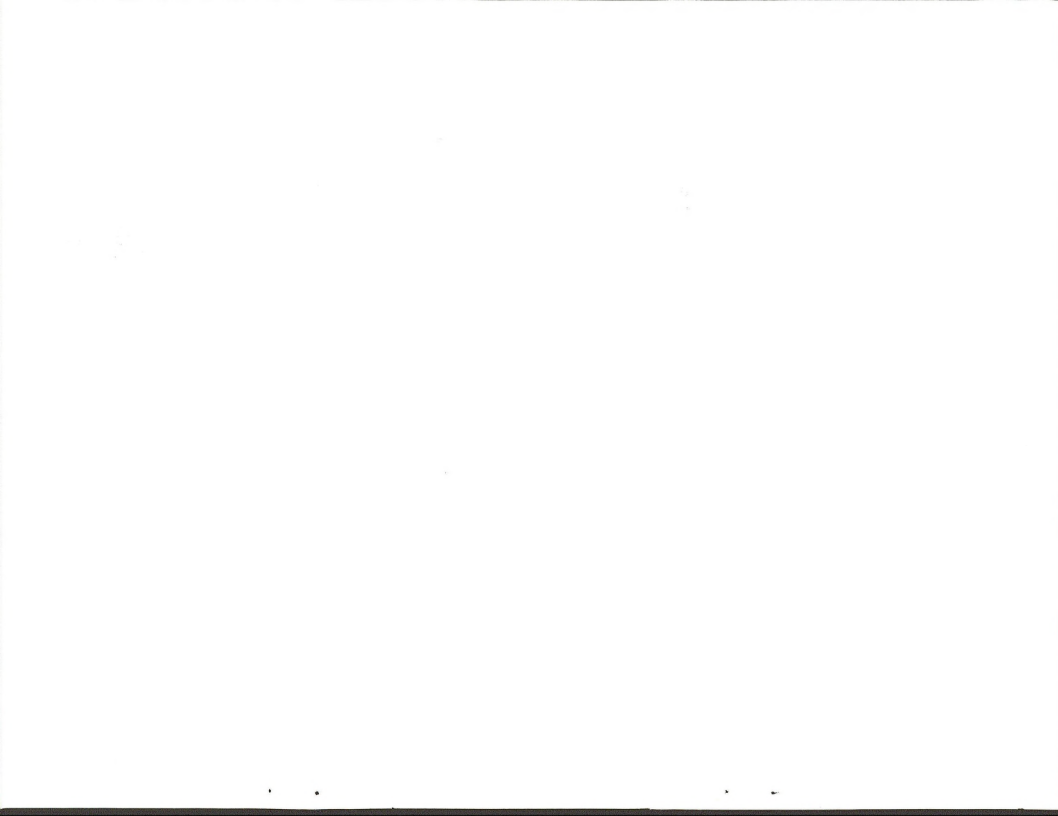
Sampling		Agsm	Orhy	Stco	Pofe	Pose	Kocr	Agsp	Sihy	Cafi	Cael	Hija	Brte	Artr	Arsp	Arpe	Atco	Atga	Eula	Chvi	Magl	Save
Pasture	Site																					
Pasture C	C1-1	5		0		0								5			0				0	
(Grazed	C2-1	0		0					2					6	0						0	
1 Nov.-30	C3-1		2	8		5					0			7			5					
Apr.)	C4-1			0		0			0					8							0	
	C5-1	0	0	7		0			0					6								
	C6-1	5	15	8										7			5					
	Exc.	0	0	0		0			0			0		5								
Pasture D	C1-1	5	5	5		5			0	25				5					15		0	
(Grazed	C2-1	6	28	0		5						0		6	2			50				
1 Nov.-30	C3-1	7	5			5								6								
Apr.)	C4-1					5			2					15	5			23				7
	C5-1	2				5			5					11	5			56	25			
	C10-1		5	8									0	7	15		5		15			



APPENDIX C

Table 8. Percent utilization of grasses and shrubs other than the key forage species (western wheatgrass) following summer grazing by cattle during 1971. The figures are average utilization values for sampling sites obtained by estimating use within seven percentage classes and dividing by frequency of occurrence. Occurrence, hence sample size, varies for species and only a rough index to utilization is obtained. The pastures were sampled on 9 and 10 October 1971.

Sampling																				
Pasture	Site	Orhy	Stco	Pofe	Pose	Kocr	Agsp	Sihi	Hija	Cael	Cafi	Brte	Feoc	Artr	Arsp	Arpe	Atco	Atga	Eula	Save
Poison	C1-1	0	19	5	0			0		2					0					
Buttes	C2-1		26		0	0		0	0		10				0					
(Grazed	C3-1	38	24		0	2		0		7		0			0					
15 Apr.-	C4-1		0		0			0		3		0			0			0		
15 Nov.)	C5-1		15		0			0							0	0			0	
	C6-1				6			0							0					
	C7-1			43	5	20		0												
	C8-1			50	0	1		0												
	C9-1		36	0	5	0		0		0					0					
	C10-1		10		0			0				0			0					
	Exc.I			42	5	15		5				0			0					
Oppenheimer																				
East	C1-1		28		0			0		25		0			0					
(Grazed	C2-1		0		0	0		0				0	0		0					
1 May -	C3-1				5			5				0			0					
30 Sept.)	C4-1		5		0			1							0	0		0	0	
	C5-1		23		5			0							0					
	C6-1		2		1			0				0			0					
	C7-1		50		0			1				0			0					
	Exc.		25	25	0			0		6					0			0		



APPENDIX C (Contd.)

Table 8.

Pasture	Sampling Site	Crhy	Stco	Pofe	Pose	Kocr	Agsp	Sihy	Hija	Cael	Cafi	Brte	Feoc	Artr	Arsp	Arpe	Atco	Atka	Eula	Save
Oppenheimer																				
West	C1-1	15			0			0						0	0			0		
(Grazed	C2-1	70			1			0		6				0						
1 May -	C3-1		21		0			0				0								
30 Sept.)	C4-1	5	21		0			0		0				0			0			
	C5-1	Not Sampled																		
	C6-1	5	0		0			0				0		0	0			0		
	C7-1	0	0		0			0						0						
	Exc.	23	15		1	1				12				0						
Pasture C	C1-1	5			0			0						0			0			
(Grazed	C2-1	34	42					5				0	0	0			0			
1 May -	C3-1	0	7		0			0		0		0		0			0			
31 Oct.)	C4-1	30	35		0			0						0			0			
	C5-1	12	27		0			0						0						
	C6-1	5	15		0			15	0			0		0			0			
	Exc.	35	37		0			5						0						
Pasture D	C1-1	10			0			0		10		0		0	0		1			
(Grazed	C2-1	50	22		0				0					0					25	
15 July -	C3-1		80		0									0						
31 Oct.)	C4-1	0			0									0	0			5		0
	C5-1	25			5			0						0	0		5	8	1	
	C8-1	16			5			0									0			
	C10-1	1	5		0			5				0		0	0		0		8	

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